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33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1.
Telephone: WHitehall 9233 (12 lines) *Telegrams: "Trazette Parl, London"*

BRANCH OFFICES
GLASGOW: 87, Union Street . . . . . *Central 4646*
NEWCASTLE-ON-TYNE: 21, Mosley Street . . *Newcastle-on-Tyne 22239*
MANCHESTER: Century House, St. Peter's Square . . . *Central 3101*
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LEEDS: 70, Albion Street . . . . . *Leeds 27174*
BRISTOL: 8, Upper Berkeley Place, Clifton

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CONTENTS

The Minister on the Transport Bill

THE speech of Mr. A. T. Lennox-Boyd, Minister of Transport, to the Institute of Transport 33rd anniversary luncheon in London on November 12, was the first he had made since publication of the revised Transport Bill to a gathering so widely representative of transport interests. Referring to the Bill, he said he hoped they had evolved an agreement which would correspond to what the industry would consider to be right and in the interests of the nation. Competition, he said, should be fair competition based on competitive costs, and the changes in the position of the railways foreshadowed in the Bill were quite revolutionary and should be approached in the light of present conditions and not those of the days when the railways were a monopoly. He personally would never be too proud to listen to arguments. Parliament was a great forum where every point of view should be put forward. With regard to developments in the transport system, he deplored the fact that the country's desperate economic position had imposed certain capital restrictions. No Minister of Transport could ignore the fact that they had on the roads every week a loss of life equivalent to the disastrous railway accident at Harrow, but in financial matters he could not make claims for the domestic sphere which might interfere with the overall plan. The Minister welcomed the representatives of overseas and Colonial transport at the luncheon, because of the vital role of transport in developing these areas. It was his endeavour to keep in touch with all the thought and the research which bodies such as the Institute of Transport undertook. The efforts made since the Transport Bill was first published to consult all interested parties are well known, and coupled with the Minister's expressed interest in research give hope for the evolution of a transport system of such efficiency that the temptation to disturb it again will not arise.

Diesel Trains for British Railways

A FIRST step was announced this week in a £500,000 programme of introducing multiple-unit diesel trains on British Railways. The decision to undertake this development, stated to have been reached after close study of diesel operation in other countries, can be regarded as a result of consideration by the Railway Executive of the findings of a special committee to which Mr. Gurney Braithwaite, Parliamentary Secretary to the Ministry of Transport, referred in answering a parliamentary question on April 4 (see our April 18 issue). At first the trains will operate in the West Riding of Yorkshire. Other areas, including Scotland, are being surveyed for development later. As described elsewhere, the trains will be made up of two car units capable of operating individually or in sets of up to eight cars; the motor cars will be powered by two 125 h.p. under-floor engines with mechanical transmission. It is intended to place orders for engines and transmissions for sixteen motor coaches as a first instalment of the programme with Leyland Motors Limited and Walker Bros. (Wigan) Ltd. An area familiar with frequent road services has been chosen for the first trains, and to establish their popularity close attention to convenient and easily-remembered timetables and general amenities at stations will be required.

The Steel Bill

THE main features of the Iron & Steel Bill published last week are in accord the White Paper of July. The Government proposes to set up two bodies, a board to supervise the industry, and an agency to take over and dispose of the assets now owned by the State. The authority of the board is to extend over the sectors of the industry not nationalised, but not over the engineering and other extraneous activities placed by the Labour Government under the Iron & Steel Corporation when they happened to be conducted by firms concerned also with steel production. The board is to have an independent chairman and members appointed from men with experience of both sides of the steel industry, and of the steel-using industries. Its responsibilities would embrace raw material supplies and price control. As to production, the board is to be authorised to consult with the industry to secure necessary capital development; the Minister of Supply may provide for such development where the industry is unwilling, and may undertake development not commercially justified where the national interest requires the additional productive capacity. The board also is to be empowered to prevent any company from engaging in schemes deemed prejudicial to general development. It thus will largely replace the highly efficient Iron & Steel Board of 1946. Though it is hard to see how much is to be left to competitive forces, the Bill should go far towards achieving its purpose of "promoting the efficient economic and adequate supply of steel under competitive conditions."

The Burden of London Transport Costs

THE view that London Transport makes an unfairly large contribution to British Transport Commission revenues is refuted by Lord Latham, Chairman of the London Transport Executive, in a letter published in *The Times* last Tuesday. In 1951, London Transport contributed only £250,000 to the Commission's working surplus of £49 million. This contribution was the result largely of net receipts of some £1·5 million from advertising and letting of sites, which with those of £545,000 from London Transport railways offset the £2 million deficit on the road services. It

was less than one-quarter of one per cent of the book value of the assets employed. Last year, therefore, London Transport passenger services were heavily subsidised from B.T.C. general funds. This year, he points out, wage increases, the increase last March in the duty on fuel oil, and Government intervention in the application of a fares scheme which already could not produce revenue sufficient to balance expenditure, mean that London Transport revenue is dearer and costs up to the tune of some £4·3 million, apart from the recent wage increase, with net revenue running at a rate insufficient to meet interest on money invested in plant and equipment. The impression that London Transport passengers subsidise fares outside London arises from the steeper increases since the war of London Transport compared with main-line fares. Meanwhile the L.T.E. provides services with fares 71 and wages and costs of materials including fuel over 120 per cent above pre-war.

Overseas Railway Traffics

CONSIDERABLE advances in operating revenues were again recorded by the Canadian National and Canadian Pacific railways during September. On the C.N.R. the improvement in operating revenues amounted to £1,551,000 at £19,197,000, and after operating expenses, at £16,904,000, had been taken into account, net revenue was £987,000 higher at £2,293,000. The increase in C.P.R. net earnings was £388,000 at £1,036,000, as a result of a £1,034,000 rise in gross earnings and a £646,000 advance in working expenses. On the aggregate, C.N.R. net revenue for the 39 weeks to the end of September was down by £783,000 at £9,717,000 and C.P.R. net earnings for the same period had risen by £1,260,000 to £6,269,000. Gold Coast traffics made a £73,121 improvement to £251,844 in September and receipts for the 25 weeks of the financial year 1952-53 were £226,698 higher at £1,686,732. Operating revenues of the International Railways of Central America fell by $20,744 to $909,367 in September and the total decline since January 1 was $169,447 at $9,797,041.

Winter Transport Outlook Discussed

A MEETING to review the inland transport position for the coming winter recently took place between the British Transport Commission, the Railway and Road Haulage Executives and the Association of British Chambers of Commerce, Federation of British Industries, National Farmers' Union and National Union of Manufacturers. It was recognised that freight traffic is at present moving freely by rail and road and that more tonnage could be handled by both Executives, and it was agreed that unless winter conditions were abnormally severe, there was every prospect that inland transport would be adequate to all requirements during the coming winter. Nevertheless, as abnormally bad weather, fog, and illness are always possible, the Conference agreed to keep in being the liaison machinery set up throughout the country last winter, to be brought into action if necessary. Reference to the successful liaison established by meetings of this kind last year was made in the B.T.C. report for 1951. All engaged in agriculture, commerce and industry are being asked to continue and intensify co-operation throughout the country with British Railways and British Road Services in all measures which will assist in making the best use of transport. These include careful regulation in the forwarding of traffic, loading vehicles to capacity, ordering only the precise numbers required, and dealing with them promptly.

Export of Railway Materials

COMPARISON between figures in the September *Trade & Navigation Accounts* for the first nine months of this year with those for the first three quarters of 1950 and 1951 shows marked increases over the three years in both the tonnage and value of locomotive exports to South Africa, to "British East Africa" (mainly the territories served by East African Railways & Harbours, also Nyasaland), and to Australia. The greatest proportionate increase was in exports to "other Commonwealth countries," of which the total value for January-September rose from £229,889 in 1950 to £366,138 in 1951 and then sharply to £1,281,548 in the current year; corresponding figures for the "other foreign countries" group are £862,974, £697,281, and £2,037,012. Tonnage increases are proportionately less, but not much so, so that price increases were small. Passenger rolling stock exports to the "other Commonwealth" and "other foreign" groups showed a similar trend. The most spectacular increase in wagon exports was to Australia, to the value of £2·3 million for January-September of this year against less than half-a-million for 1950. The various British West African and Australian railways received the greatest quantities, and greatest increases in these, of other equipment. These figures point to the opening up of new markets, but their purpose is largely defeated by failure to specify the countries lumped together in the groups mentioned; and the long-term nature of railway material orders and shipping considerations must be taken into account in any comparison between periods.

A New Era in North Borneo

BRITISH North Borneo, previously administered by a chartered company, but since the war a Crown Colony, is about the size of Scotland, which it resembles in its mountainous topography. Apart from a few ports scattered round its coasts, there is little civilisation, and the mountain barriers seal off the plains of the hinterland, which are further intersected by inland ranges. The country is well-wooded and has a rainfall of up to 200 in. annually, spread over two monsoon periods. The 116 miles of railway in the Colony are confined almost entirely to the coastal plain between the west coast and the Crocker Range, except for an extension piercing this barrier by way of the Padas River gorge, and providing an outlet from the Keningau Plain on the fringe of the hinterland. Although it was put almost out of action by war damage, the railway has since been largely rehabilitated; in 1951 more than 500,000 passengers and some 35,000 tons of goods were carried, and profits exceeded £29,000, after deductions for renewals. Future prospects are also considered to be good, particularly if the mineral resources of the colony come up to expectations.

Mile-a-minute Schedules

IN a recent editorial note we commented on the wisdom or otherwise of reintroducing mile-a-minute schedules into British timetables in present track and traffic conditions. The 83-min. booking of the Southern Region "Atlantic Coast Express" over the 83·8 miles from Waterloo to Salisbury provided the basis of this note, and the continuance of this schedule by the S.R. through the winter months is in itself evidence that such a timing is practical. Since then the Eastern Region has accelerated the down "Broadsman" to a 2 hr. run over the 115 miles from Liverpool Street to Norwich, which includes a start-to-stop booking of 45 min. over the 46·3 miles from Ipswich to Norwich; the latter section has some substantial gradients, and requires slow running over the final two miles of curved track into Norwich Thorpe, on which at least 4 min. must be spent. The running of the accelerated train has been brilliantly successful. On the first twelve days after the acceleration, the down "Broadsman" left Ipswich "right time" on eleven occasions, and reached Norwich from 1 to 3 min. early on eight, and right time on three; on the twelfth day a signal failure at Brentwood made the express 5 min. late into and out of Ipswich, but it was only 2 min. late in arriving at Norwich. The Ipswich—Norwich run has been made on several occasions in as little as 41 min.

East Anglian Timetable Revolution

THE service now operating between London and Norwich represents the most complete train service revolution that has taken place in Great Britain for many years past. The acceleration has been assisted greatly by the electrifica-

tion, electric signalling and track rearrangement from Liverpool Street to Shenfield, as well as by the excellent condition to which the track has been brought throughout the route; and it has been made possible by the exceptional competence of the new "Britannia" class Pacific locomotives. But its most admirable feature has been the willingness of the Eastern Region timetable staff to take to pieces the old timetable, and to build up a new timetable on scientific lines, backed by the enthusiastic support of the operating staff in making the new service a success. Few who are acquainted with the lethargy of Eastern Counties communications in the past could ever have dreamed that the day would come when the fastest scheduled start-to-stop run in Great Britain would be on Great Eastern metals, and that the express service between Liverpool Street and Norwich would show a higher average speed than those between Euston and Birmingham or Paddington and Bristol; yet so it is. Today it is nothing uncommon for the down "Broadsman" to average more than 80 m.p.h. over the 25 miles northwards from Finningham, a feat equal in merit to the streamline speeds of 1939.

Metre-gauge Locomotives for India

THE policy of the standardisation of locomotives on the Indian railways had its origin some 25 years ago, since when the number of types of broad and metre gauge passenger and goods locomotives has been steadily reduced. This policy has been further implemented by the completion of the first batch of an order for 100 "YP" class locomotives placed with the North British Locomotive Co. Ltd., reference to which was made in our issue of January 19, 1951. It is intended eventually to use two types of locomotives for operating the principal passenger and goods services on the broad and metre gauge lines; the "YP" and "YG" will operate on the metre gauge system. Major components will be interchangeable between these two types, and will include a common boiler and tender, a feature which should help to reduce considerably stores balances, at the same time facilitating workshop repairs. The "YP" class locomotives, which are described and illustrated elsewhere in this issue, are provided with frames of rolled-steel slab 3½ in. thick. The cast-iron cylinders are fitted with renewable cast-iron liners, a feature of present-day locomotive design.

The Transport Bill

THERE have been many occasions since the nationalisation Bill was introduced into Parliament in 1946, when issues of great moment have arisen concerning the future of the railways in this country. Until the history of the period can be written, some of them will not be known outside the industry. But some can even now be easily recognised. There was the Act of 1947 itself, with all the political storm around it; there was the decision to introduce the functional system into railway management, which was not provided for in the Act; there was the action, two years or so ago, of the then Minister of Labour, when, in the early hours of one morning, he dramatically forced the railways to accept a wages claim far greater than had been recommended by an impartial tribunal; there was the quick disillusionment of the trade unions with railway nationalisation; there was the action of the present Government only this year in the fares case. On some of these occasions there has clearly been seen the single-minded concern of railwaymen for the service to which they give their working lives. The recent tragic accident at Harrow calls this vividly to mind. Now there is a new Transport Bill, which must have a tremendous effect on the industry and will require the unselfish attention of all officers and staff wherever they are placed in the organisation.

Last week we listed the ten main principles which, it seems to us, should form the basis of the Transport Bill, or the organisation under it, so far as the railways are concerned. The first five were concerned with organisation. Briefly they were: a part-time over-all board of directors, a central railway management unit below this on non-functional lines, six railways headed by general managers, the working together of all these to deal effectively with policy and current business, and certain general matters to be dealt with by the central management.

Clause 24 (2) of the Bill says the board may be part-time, but it is to consist of persons who have had experience in the "management" of rail and road transport. Moreover, whilst we thought that finance and charges should be dealt with at the management level, the Bill places this responsibility on what may be a part-time board, which does not seem very sensible. If finance is placed at the management level, it could quite easily serve the board direct, as it did in the old group arrangements.

Clauses 14 and 15 provide for the abolition of the Railway Executive in terms which, whatever one may think of the action, can only be deplored; for the setting up of area companies to be specified in the reorganisation scheme; and for public discussion of the scheme before it is approved. We find it impossible to understand from the wording of the Bill what is intended on this matter of railway organisation. If it had been intended to provide for a simple scheme such as we outlined, surely this could have been indicated easily. Or if it is intended purposely to make the meaning obscure at this stage, brief general words could have been used. As it is, we can only hope that during the Parliamentary process further light may be thrown on these clauses of the Government's intentions. The intentions on organisation in the 1947 Act have hardly worked successfully. Do these vague clauses mean autonomous area boards? If so, how can there be strong financial unity which depends on expenditure being kept at the lowest possible level by standardisation of equipment, and so forth? The more complete is area autonomy, the weaker will be financial unity. It seems extraordinary that railway organisation matters are now to be open for public discussion, and there is even provision for later amendments by the Minister (also after public discussion) if he should so wish. He can even scrap the lot. Presumably, if it is found expedient in future to alter boundaries, and such like, this complicated public procedure will have to be gone through. Where the time will be found for concentrating on the real job of increasing the efficiency of the railways and meeting the intense competition to be expected, is hard to see.

We said on charges, that the railways should be free subject to maxima. The charges clauses of the Bill are good and most helpful, and the Minister is to be congratulated on securing for the railways the "square deal" plus, which they have been fighting for over the last 20 years. But the clauses do not apply until the charges schemes are approved by the Transport Tribunal, which may be two or three years after the Bill is an Act. It would be impossible for the railways successfully to meet free road competition in the meantime. There is even a provision that coastwise shipping and road may object to a railway rate, if *inter alia*, it is quoted to meet competition; and there is also protection for traders forwarding low-grade traffic. The levy to protect the railways has gone, but one would think that these restrictions, plus the uncertainties on organisation, would make it almost impossible for the railways to meet their financial obligations. They are not being given a fair chance as the Bill stands.

On railway staff safeguards, there are no compensation provisions as in the 1947 Act, though there are for the road haulage staff. There is no provision for restoring catering and docks to the railways; clause 24 (3) merely gives the Minister power to abolish all Executives, which may mean anything or nothing. The railway road transport provisions appear to be satisfactory.

This completes a brief survey of the railway aspects of the Bill. We do not find it reassuring. If the railways are to meet free road competition successfully, they will need to be as free as their competitors in such things as charges and conditions of carriage, and they will need to be organised and managed with the greatest possible efficiency, otherwise they will not stand a chance, and the nation which still relies on them to move the bulk of the traffic of the country will be grievously let down.

Railway Civil Engineering Maintenance

THERE seems to be an erroneous idea among students and others with no experience of railway civil engineering maintenance that it is a routine occupation confined within stereotyped limits, governed entirely by rule-of-thumb methods, and thus promising no scope for individuality. It is, in fact, quite the reverse, and is intensely interesting by reason of the great variety of works involved, the constant pitting of ingenuity against nature—and the elements in particular—and the problems presented by changing conditions, of which the foremost are increasing loads and speeds and the resulting greater wear and vibration. Many structures nearing the end of their useful life have to be carefully watched and important decisions have to be made regarding their safety and renewal.

Above all, temporary and permanent structures of all types have to be designed and built to such standards of strength as to ensure safety in all circumstances. Unlike other spheres of civil engineering maintenance, the railway demands speed in the solution of problems and in the completion of works, and the paramount necessity is avoidance, as far as possible, of delay to traffic. In this connection it may be remembered that nowadays new bridge structures are specially designed to reduce to a minimum periods of line occupation during erection, as pointed out in an editorial article in our issue of June 20 and an article in that of August 22. In his paper, entitled "Some Major Problems in Railway Civil Engineering Maintenance," presented to the Institution of Civil Engineers for discussion on November 11, Mr. A. H. Cantrell emphasises a number of these points, when he describes such problems as are involved in the maintenance of permanent way, earthworks, bridges, tunnels and large roofs of buildings.

Efficient track maintenance depends primarily on good organisation. It is the direct responsibility of the ganger and inspector, men of long practical experience, but, the paper points out, they take a greater interest and produce better work if they can be persuaded to attend evening classes and so obtain theoretical knowledge. There is no doubt that a shrewd blend of practical experience with theoretical understanding and commonsense appraisal of the circumstances makes for the most efficient and economical maintenance in all its branches. The closest contact between the District Engineer and his assistants and their men on the work is also essential, enabling problems of all types to be settled at site.

To reduce future maintenance of heavy-traffic junctions, cast manganese-steel crossing work with its much greater longevity and fewer parts is now standard practice, despite its high initial cost. It reduces the work involved in the day-to-day maintenance as well as in the comparatively early replacement of the crossing and in the building up of its work surfaces by welding. Similarly, the future maintenance of unstable formation is greatly reduced by applying modern remedial methods, such as sand-piling, blanketing, or pressure-grouting. The author particularly favours blanketing, and describes how this process can best be carried out.

The problems involved by landslides and slips are more complex, and for their solution the study of soil mechanics is essential. Half measures to prevent the movement of an embankment or cutting are worse than useless, and the only effective remedy is to anchor the toe of the slope securely, whether the slip-circle comes to the surface on the slope or whether the failure is more deep-seated. If the slip-circle emerges above but near the toe of the slope, further movement can generally be prevented by building a thick block stone wall and placing behind it a quantity of heavy material to form a berm or flat slope, thus concentrating a great weight on the toe of the slope. If the failure is higher up, the author considers that it may be better to let it take its course, because complete failure is unlikely and the quantity of earth to be taken out of the cutting or put into the bank will probably not be large. Resort to pile-driving to prevent slips should be had only if other methods have proved to be or are likely to be ineffective, or at any rate only after most careful consideration. This is because the vibration which it sets up may cause the slip to start moving, and, in any case, it is not always an effective deterrent. Drainage is all-important, and all the normal drains must be kept in good order. Moreover, concrete-lined catchwater drains along the tops of cuttings and drainage legs on their slopes, if carried down to reach the slip-surface, will often prevent subsequent trouble.

For the protection of bridge or other foundations threatened with scour, Mr. Cantrell recommends, amongst other things, the placing or pitching of gabions or "sausages," consisting of heavy-gauge big-mesh wire cages loosely filled with pitching stone; they have provided an effective remedy at many sites throughout the world.

Tunnels suffer in their old age from forms of damage and deterioration, such as bulging or shifting walls or crown, and disintegration of brick lining. The main difficulty, in carrying out their repairs is lack of space, generally precluding the use of strutting, centring, scaffolding and underpinning. In serious tunnel failures, as at Bo-Peep, St. Leonards, on the Southern Region, complete closure to traffic for considerable periods has been unavoidable. Alternatives in less serious cases are the institution of single-line working of the gauntletting track to leave space for such erections. A type of steel centring, occupying little space and recently adopted by the Southern Region is illustrated in the paper, which also contains a warning against the use of the gunite method of relining tunnels except where the under bricks prove to be of really good quality.

A method successfully used for strengthening the webs of bridge main girders is also described. As there are still many bridges with wrought-iron cross girders in the decking, it is useful to learn of special measures taken to strengthen them and their connections. They consist of welding steel plates on to the iron members, but great care has to be taken to avoid tearing off the top laminations of the iron; the special methods used are set forth in the paper. Among the many other varieties of engineering maintenance works mentioned are the strengthening of arch viaducts that had settled or deteriorated and the renewal of large-span station roofs. Incidentally, part of the arch span at London Bridge Station is to be renewed in aluminium, as the existing arches are not strong enough to haul up heavier material.

U.S. Railways 70 per cent Diesel

FIGURES published recently in the *Monthly Comment* issued by the Bureau of Transport Economics & Statistics, Interstate Commerce Commission, show that in the United States though the capital cost of diesel-electric locomotives may be twice that of steam locomotives of comparable power, diesel fuel costs on the average are no more than half those incurred by steam locomotives. In the first six months of 1952, the cost of diesel fuel in road freight service was 16·3 cents per thousand gross ton-miles, whereas on the same unit basis coal for steam locomotives cost 31·5 cents, and oil for oil-fired steam locomotives 39·8 cents. The diesels also had a substantial advantage over straight electric working, fuel for which cost 29·1 cents per thousand gross ton-miles.

In passenger operation, diesel fuel cost 3·0 cents per coach-mile, compared with 5·6 cents for coal-burning steam locomotives, 4·7 cents for oil-burners—a reversal of the order compared with coal-burning and oil-burning steam locomotives in freight service—and 3·8 cents for electric traction. In yard shunting, the advantage was even more markedly with diesel traction, for the cost of diesel fuel per yard shunting-hr. was 69·7 cents only, whereas that of coal-fired steam locomotives was $2·44, of oil-fired steam locomotives $3·07, and of straight electric locomotives $1·18 per yard shunting-hr.

In making these comparisons, it would be less than just to hide the fact that at the end of 1951, 97·2 per cent of the 17,493 diesel-electric units in service on Class I railways in the United States were built during the previous twelve years, and 38 per cent as recently as 1950 and 1951.

so that the diesel stock as a whole enjoyed every advantage of modernity. Of the 21,747 steam locomotives still remaining, on the other hand, 31·7 per cent were built before 1915, and were thus at least 37 years old, while 85·3 per cent came into service before 1930; 2 per cent only were new in 1950 and 1951. Of electric locomotives totalling 780, some 88 per cent were put into traffic before 1930.

The same issue of the I.C.C. *Monthly Comment* gave the following significant figures in regard to proportion of U.S.A. traffic worked by the different forms of motive power in the first seven months of 1952, compared with 1951 and 1946 respectively. In 1952 the diesel share of road freight haulage, expressed in gross ton-miles of traffic, had risen to 64·2 per cent, compared with 52·7 per cent in 1952 and 9·7 per cent in 1946. At the same time the proportion handled by coal-burning steam locomotives, 69·6 per cent in 1946, dropped to 35·9 per cent in 1951 and 26·7 per cent in 1952; with oil-burning steam locomotives the corresponding figures were 18·6, 9·7, and 7·1 per cent. Straight electric haulage of freight is now mainly confined to the electrified sections of the Pennsylvania, the New York, New Haven & Hartford, and the Chicago, Milwaukee, St. Paul & Pacific Railroads; in 1946, 1951, and 1952 electrically-hauled freight trains were 2·1, 1·8, and 1·8 per cent, respectively, of the total.

Of passenger service, the diesel-electric share, expressed in total coach-miles, rose from 15·3 per cent in 1946 to 62·7 per cent in 1951 and 70·0 per cent in 1952, while that of coal-burning steam locomotives was falling from 52·1 to 19·1 and 13·7 per cent, and of oil-burning steam locomotives from 26·2 to 11·8 and 9·6 per cent; the electric haulage figures remained almost stationary at 6·5, 6·4, and 6·6 per cent. In shunting service, diesels were responsible for 29·5 per cent of the yard shunting-hr. in 1946, 67·8 per cent in 1951, and 75·5 per cent in 1952; coal-burning steam locomotives for 59·6, 25·8, and 19·2 per cent, oil-burning steam locomotives for 9·6, 5·8, and 4·0 per cent, and electric shunters for 1·3, 1·2, and 1·2 per cent respectively.

A rough average of all these figures shows that diesels are now responsible for 70 per cent of all U.S.A. railway operation, at a fuel cost that is one-half that of other forms of motive power in freight working, two-thirds in passenger working, and one-third in yard shunting. This changeover has taken place in a total of little over twenty years, and the major part of it in no more than five years; it is almost certainly the most revolutionary motive power development that has been effected in so short a time in any country in the world.

New Zealand Government Railways

THE report by Mr. H. C. Lusty, General Manager of the New Zealand Government Railways, for the year ended March 31, 1952, draws attention to the deficit of £1·2 million, and explains that both revenue and expenditure figures were much affected by the waterfront and allied disputes which prevailed from February to July, 1951. The rise of 8·6 per cent in gross revenue compared with the preceding year was caused mainly by the higher rates introduced in May and October, 1950, in December, 1951, and in March, 1952. An increase of 2·2 per cent in goods tonnage contributed to the increase in revenue.

The following are some of the principal results for the year under review:—

	1950-51	1951-52
	Millions	
Passenger journeys	24·8	21·3
Goods tonnage carried	9·6	9·8
Total train-mileage (revenue) ...	14·2	12·4
	£ millions	
Coaching traffic earnings	3·2	2·8
Goods traffic earnings	15·0	17·0
Total operating revenue	18·5	20·1
Net operating results	+0·006	−1·2

Passenger train-mileage decreased by some 23 per cent because of the coal shortage resulting from the industrial disputes, and of shortage of staff. Express services were curtailed, sleeping-car accommodation restricted, and many mixed trains rescheduled as goods trains. Suburban services were severely cut on Sundays and at off-peak hours. Parcels revenue fell nearly 2·5 per cent, being adversely affected by diversion of traffic as a result of restricted train services and the introduction in April, 1951, of a prepaid parcels system; the latter facilitated staff savings through withdrawal of "to-pay" parcels facilities, but traffic was lost, some being consigned as goods "to pay." Freight revenue was a record, and represented 84 per cent of total operating revenue. There were increases in coal, cement, benzine, wool, and dairy products, and decreases in agriculture lime, timber, and meat traffic, the last being affected by the waterfront dispute.

The 15 per cent general rise in wages and salaries from February 15, 1951, added £1 million to the wages bill, and a new General Division wage schedule for the whole year, with arrears from January 1 to March 31, 1951, added another £565,000, while a new salary schedule effective from April, 1951, added another £83,000. During the year it was again necessary to import coal; the cost of imported coal rose 94 per cent to 220s. a ton, and that of New Zealand hard and soft coal also rose. The coal shortage during the earlier part of the financial year placed a heavy burden on the 77 oil-burning locomotives in the North Island. Mr. Lusty states that the increase in the cost of fuel oil may necessitate reconversion to coal burning, if the improvement in coal supplies continues.

Road services gross revenue rose by 14 per cent to the record of £2·4 million, and expenditure increased by 12 per cent to £2·43 million. Mileage and passenger journeys increased, but expenditure per vehicle-mile increased because of the higher cost of motor spirit, materials, and wages. Most fares on road services were increased during the year. Improvement and modernisation of the passenger fleet continued. The New Zealand Government Railways refreshment branch showed a loss of £50,000, attributable to increased costs and a decline in patronage due to train service cuts. Whilst reduced train services caused total train mileage to fall 12·5 per cent, Mr. Lusty points out that whereas by July 21, 1951, the tonnage of goods by rail declined by 19 per cent, the year ended with the net increase of 2·2 per cent. During the year, new records were established in the average loading of goods and mixed trains, passenger train speeds, gross ton-miles per train-hour, net ton-miles, and average length of haul. The percentage of wagons out of traffic fell from 9·8 to 9·4, and at May 24, 1952, was reduced to 8. Punctuality suffered from reduced services, floods, and other factors; for the year under review 58 per cent of recorded arrivals were under five minutes late, against 61 per cent for the previous two years.

Wagons placed in service increased the total stock by 598, which alleviated the wagon shortage but was insufficient to overcome all difficulties. At March 31, 1952, the number of wagons outstanding on current orders was 4,448, of which 4,043 were on order from overseas. Three new "Ja" class steam locomotives were placed in service in the South Island and one "Ew" class electric locomotive in the North Island. Further "Ew" class, 660-h.p. diesel-electric, and oil-burning "Ja" class locomotives were expected to be placed in service in the North Island during 1952; a small number of "Ja" class locomotives were due for completion for service in the South Island and the first units of 57 diesel-mechanical shunting locomotives are expected towards the end of this year.

Mr. Lusty emphasises the difficulty of recruiting railway staff, which is aggravated by the prevailing shortage of juvenile labour caused by the low birth rates of the depression years; no improvement in this respect is anticipated before 1956, and little improvement in the intake of clerical cadets, cleaners, apprentices, and so on. In conclusion he explains that rising operating costs have prevented an operating surplus, largely because increased costs have not been absorbed in railway charges in time to offset higher expenditure. Unless such increases in charges are made when the need becomes manifest, deficits are inevitable. Nevertheless, despite their many difficulties, the railways again achieved a record in the distribution of goods throughout the country.

LETTERS TO THE EDITOR

(The Editor is not responsible for opinions of correspondents)

Nigerian Railway Problem

November 6

SIR,—An editorial note in your October 3 issue deals with the purchase of locomotives and spares for the Nigerian Railway. In the closing sentence it is said that "manufacturers have pressed for adequate ordering of spares by Colonial railways when contracts are placed for new locomotives, but budgetary reasons may sometimes prevent them from making provision for spares on the scale desired." So far as Nigeria is concerned, this is by no means a true statement of the position.

It has been the practice for the Nigerian Railway to order spares regularly with indents for new locomotives, but it is not usual for such spares to be supplied at the same time as the locomotives. During the war, the railway received a consignment of lease-lend locomotives from America, and with them were supplied essential spares to cover the first few months of their life.

Again, when 24 locomotives were purchased from the Montreal Locomotive Works, essential spares were provided with the consignment at the suggestion of the manufacturers. The railway found this arrangement so acceptable that when further locomotives were ordered from the United Kingdom the fact that essential spares should be supplied at the same time was mentioned. The reply was that it was not the practice of United Kingdom manufacturers to undertake to do this. There is no trace in the files of the Nigerian Railway of any correspondence from United Kingdom manufacturers pressing for the ordering of adequate spares when contracts are placed. The Nigerian Railway has tried to follow this procedure, only to meet with disappointment.

Your obedient Servant,

HAROLD COOPER
Public Relations Officer

Nigerian Government,
11, Custom Street, Lagos, Nigeria

Impressions of Spanish Railways

September 29

SIR,—When travelling recently in Spain, I could see that the R.E.N.F.E. plan of reorganisation initiated a few years ago is bearing fruit. The schedules of the "Sud Express" and the day *rapide* between Madrid and the French frontier at Irun were cut by one hour north and 45 min. southbound in the summer timetable. The "Sud Express" covers the 386 miles from Madrid to San Sebastian in 11 hr.; train No. 9, the day *rapide*, running on alternate days with the Talgo train, makes the run in 10 hr. 55 min.; and the Talgo takes 8 hr. Punctuality of main-line trains at termini was excellent despite lateness at intermediate stations. At Barcelona Termino, for instance, 17 out of 18 expresses from Madrid, Valencia, and Bilbao were observed to arrive on time, and one was 5 min. late.

All long-distance trains seen were composed of all-steel stock of modern design weighing 38-42 tons; the sleeping cars of the Wagons-Lits Company are heavier. Expresses usually consisted of 8-11 coaches (350-520 tons), but loads occasionally are 600 tons with trains from Madrid to Andalusia and 650 (14 bogies) on the night express from San Sebastian and Bilbao to Madrid, where the ruling gradient is 1 in 55 on the electrified and 1 in 87 on the steam-hauled sections. Steam locomotives are mainly of the 4-8-2, 4-8-0, and 2-8-0 types, with a few three-cylinder 2-10-0s and articulated double 4-6-2s and double 2-8-2s. The heaviest design of 4-8-0 weighs 104 tons with 5-ft. 4-in. driving wheels. Electric locomotives are of the 2-C-C-2 and CC types, which haul 500-ton trains over the Guadarrama range from Madrid to Avila, 75 miles in 2 hr., over the summit at La Cañada, shortly before Avila and 2,500 ft. higher than Madrid.

In making up lost time there is some good locomotive work. Thus on the day express from Madrid to San Sebastian, a four-cylinder 4-8-2 compound with a load of 500 tons gained 8 min. on the 70-min. schedule from Venta de Banos to Burgos, 52 miles, rising 400 ft., and maintained 53 m.p.h. up a gradient of 1 in 250. This type embodies the Chapelon principle, and has 5-ft. 9-in. driving wheels; it is considered particularly successful. The Talgo train runs at sustained speeds of 75 m.p.h. Fish is conveyed in 500-ton trains from Corunna to Madrid, 520 miles, in just over 26 hr., despite heavy gradients.

With the gradual improvement in track and operating arrangements, Spanish railways will have more to show.

Yours faithfully,

VUILLET

58, Rue de Courcelles, Paris, 8e

Preservation of Locomotives

October 4

SIR,—Your recent correspondence regarding the possible preservation of a G.E.R. "Claud Hamilton" locomotive prompts me to ask what has become of the very fine model of *Claud Hamilton* owned by the former L.N.E.R. I last saw this model at the Model Railway Club Exhibition about five years ago, and I presume that it is now in the possession of British Railways. If I remember rightly, it was made by apprentices at Stratford Works soon after the prototype was built, and showed the engine in its original condition with round topped tender. It was very accurately made and beautifully finished in the old G.E.R. livery; the scale, I believe, was 2 in. to 1 ft.

As it is probably too much to hope that one of the actual engines can be preserved, I would like to suggest that this model be permanently displayed in a glass case in the circulating area of Liverpool Street Station. Not only would it delight the hearts of all admirers of the old Great Eastern Railway, but it would also make a fitting counterpart to the model of the N.L.R. 4-4-0 tank engine in the concourse of Broad Street Station.

Yours faithfully,

DERRICK J. W. BROUGH

135, Mulgrave Road, Cheam

Preserving Old Coaches

October 17

SIR,—Of the many beautiful and interesting things at the Kings Cross Centenaries Exhibition, may I applaud the inclusion by the Railway Executive of the East Coast third-class corridor coach, so nearly and so handsomely restored to its original condition, and at the same time express the hope that this vehicle is regarded as an historical relic for permanent preservation?

Old carriages so easily become firewood, and it is extremely desirable that two or three representative examples be kept, for both exhibition and film work, as in the United States. Already we have some of the very ancient; we have Queen Victoria's London & North Western saloon. But the East Coast corridor third of 1898 is a perfect example of the very finest coachbuilding practice, assigned to ordinary public service, at the turn of the century, with its great gas lamps, its elegant clerestory with the fancy glass intact, its monumental necessaria, its very early example of the full-width Pullman vestibule and buckeye coupler, and its beautiful finish.

If it is possible to preserve only one such vehicle, this should be the favoured candidate, though one hopes that the London & South Western lavatory tri-composite, shown at Waterloo in 1948, will survive also as a specimen of a type of carriage once used all over Great Britain.

Yours faithfully,

C. HAMILTON ELLIS

33, Norfolk Square, Brighton 1

THE SCRAP HEAP

Women on the Footplate

There is an early claimant to this distinction, as the actress, Fanny Kemble, made such a journey with George Stephenson himself, on the Liverpool & Manchester Railway, on August 25, 1830, or some three weeks before the line was officially opened. Fanny Kemble was playing at Liverpool at the time, and she and her father, Charles Kemble, received an invitation to become members of a party who were to make an experimental trip on the line. Miss Kemble published an entertaining account of this journey in her book, "Record of a Girlhood" (1878). She recorded that the train, at one point, attained a speed of 35 m.p.h. —*From a letter to the "Radio Times" by Mr. E. A. Forward.*

Transcontinental

From a correspondent, Mr. A. J. Richards, we have received the photograph reproduced herewith of C.P.R. locomotive No. 374, a wood-burning 4-4-0. On October 2, 1946, he writes, this veteran was placed on permanent public exhibition in Kitsilano Park, Vancouver, on the shores of the Pacific. In May, 1887, this 66-ton locomotive hauled the first transcontinental passenger train from Montreal to Vancouver, the train consisting of first class coaches, colonist cars, two sleeping cars, and a dining car bearing the name *Holyrood*. The cars were expensively and magnificently equipped in order to attract Oriental travel, and the sleeping cars were provided with baths.

In the summer of 1945 this notable locomotive was again run from Montreal to Vancouver and for this journey C.P.R. pensioners composed the whole train crew, whilst others travelled as passengers in the train. On this occassion the locomotive boiler carried on each side the legend "Ocean to Ocean," in white lettering, and the tender bore the inscription, "Our National Highway" (as shown in the photograph). On each side of the smokebox were flags, one bearing the word "Atlantic" and the other "Pacific." Underneath the headlight were two shields, one inscribed "Incorporated 1881," and the other "Completed 1887." The locomotive was conveyed on a road trailer from Vancouver Station to her final resting place in Kitsilano Park.

Whistle-Stop Specials

The "GOP Special" (Republican Party) contained 18 cars, the largest campaign train in history. The specially painted two-tone-grey train even included a New York Central electrical power car, a dormitory sleeper for the crew, and a five-room, lounge-business car for the General and Mrs. Eisenhower.

The Democratic campaign special contained all the cars needed to accommodate the press and working staff of Governor Stevenson. Speeches were written, typed, and revised while *en route*. The big lighted end-sign let bystanders know that the campaign special was on its way—both political parties using the railroads to get to the people.—*From "Wheels," the journal of the American Car & Foundry Company.*

The Romantic Tunnel

Few people have souls so dead to youthful romance that they have no feeling for a tunnel. The vast majority must experience a perceptible quickening of the pulse on reading that the Woodhead Tunnel leading from Manchester through the Pennines to Sheffield, three whole miles of gorgeous blackness, will be handed over to British Railways next summer. A tunnel can inspire two thrills, one of danger and the other of safety. The danger of plunging into the dark is obvious enough, though it is not what it was before the days of electric lamps when we felt the old gentleman in the opposite corner of the carriage stealing towards us with noiseless steps. The thrill of safety is more modern and has come with aerial attack. . . . Wonderfully exciting was the story of the late Hermann Göring and his elaborate train which at night retired into the secure comfort of a tunnel. —*From "The Times."*

Unremunerative Branch Lines

I suggest that the public too has an important part to play in keeping branch lines open. We have no right to grumble about facilities withdrawn if we do not make use of our branch lines where they remain open. Therefore those who live near branch lines and wish to see them prosper should use them when they can, in spite of the slight extra mental exertion required in thinking in terms of the train service at 7.42 a.m., 10.18 a.m., 1.9 p.m., and so on, rather than of the bus service at ten minutes past each hour.—*From a letter to "The Manchester Guardian."*

Forms of Address

But Transport Workers, Female, vary greatly in their forms of address. Underground life, being strange to men and women, however natural to moles, undoubtedly evokes bad manners. The women who preside over crowded platforms in the rush hours of Tube travel scream at one with strident imperatives. . . . There are no ducks about in subterranean Charing Cross or Oxford Circus. But the Clippie, up above, who, on a soaking night, has to cope in the murk with ticket-punching, change-giving, and the rejection of would-be (and surly) passengers when the vehicle is full to its legal limit, often has love on her lips, if not on her heart. "Sorry, ducks, next one here in a minute."—*Ivor Brown in "The Observer."*

This old C.P.R. locomotive, which hauled the first transcontinental passenger train from Montreal to Vancouver, is now on permanent exhibition in a Vancouver park

Travel Topic

(Multiple-unit diesels are to be used in North of England)

By gum! And so forth,
Good people up north
Will soon have a grand opportunity
Of testing the gain,
The pleasure or pain
Of travel by "multiple-unity."

Some hard-hearted folk
May gibber and joke
And think the idea a silly 'un:
Howe'er that may be,
One has to agree
It's costing a cool half a million.

And, if it comes off,
We'll no longer scoff
But, with most remarkable unity,
Will go in reverse
And commend it in verse
To the anxious commuting community.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Delivery of Electric Locomotives

Of the 40 class "4-E" electric locomotives on order from the North British Locomotive Co. Ltd. and the General Electric Co. Ltd., three have been placed in service, one is under erection and two were unloaded in September. They will be used chiefly on fast passenger services, including the two mail trains daily between Johannesburg and Durban. One of the new units was tested successfully between Durban and Volksrust, and it is intended to allocate ten to the Natal System and the rest to the Cape Western System.

PAKISTAN

Alco Diesel Locomotives

An order for nine diesel-electric passenger locomotives of 1,600 h.p., to be shipped during the first quarter of 1953, brings the total orders received from the American Locomotive Company to 32. Fourteen of the 23 passenger locomotives and the nine goods locomotives are in service. The passenger locomotives were put into regular mail and express service between Karachi and Lahore in April and have already covered approximately 1,000,000 miles.

UNITED STATES

New Stock for New Haven

In addition to the 26 additional "RDC" type diesel-hydraulic railcars recently ordered, the New York New Haven & Hartford Railroad has ordered ten 50-seater Mack railbuses, and 100 stainless steel air-conditioned coaches for its multiple-unit electric suburban services out of New York. Of these coaches, 89 will be 130-seat passenger cars, seven will be combination brake and passenger coaches, and four will be special "club" saloons for use by clubs of season ticket-holders in the areas served. Ten additional electric locomotives for hauling main-line trains between New York and New Haven also have been ordered.

The New Haven is experimenting with a new type of cafe coach, comprising a 16-seat dining section, an electric kitchen, and the remainder ordinary coach seating, which can be manned if necessary by a crew of two, with the aim of providing economical refreshments on trains with relatively light patronage.

CANADA

Less-than-Wagonload Traffic

The C.N.R. will introduce a preferential service for less-than-wagonload merchandise traffic. Such consignments will be moved with the same speed as perishable and livestock traffic. Distinctive placards of bright yellow centred with a green ball will be placed on the wagons, which will have priority handling at stations, freight sheds, and distribution points on the C.N.R. system.

Extension of C.T.C.

The Canadian National Railways are to install centralised traffic control on 105 miles of single track, and automatic block signals on 35 miles of double track between Atikokan and Port Arthur. The installations will speed the flow of traffic, particularly grain and iron ore, to the head of Lake Superior. The contract for the work has been awarded to the General Railway Signal Company, and installations will be completed in 1953.

ARGENTINA

New Diesel Cross-Country Service

A new one-class express cross-country service using a new four-coach Ganz diesel set has been introduced between Rosario and Mendoza, with connections to Santa Fé, and to San Juan and San Rafael. It uses the General Mitre Railway between Rosario and Venado Tuerto and the General San Martín Railway thence to Mendoza. Two journeys a week are to be made for the present. The distance of 988 km. is covered in 13 hours, at an overall speed of 76 k.m.p.h. A bar service is provided throughout the journey.

Dutch-built Rolling Stock

The first four coaches to arrive in Argentina under the contract signed with Werkspoor of Amsterdam were recently exhibited at the Presidente Perón terminus of the General Mitre Railway in Buenos Aires. The principal features of these coaches are extra space between seats, extra large windows, special springing, and doors and windows designed to exclude dust. The first class coaches carry 72 passengers and the second class, 103.

SWITZERLAND

Gotthard Power Station

A scheme to build a power station, jointly owned by the Federal Railways and the Centralschweizerische Kraftwerke, of Lucerne, has been approved by the board of the Federal Railways. The new power station is to be built in the Gotthard massif above Göschenen, at the northern end of the Gotthard Tunnel, and will take advantage of the water power available in that region. The joint undertaking will be known as Kraftwerk Göschenen Aktiengesellschaft. Its share capital of fr. 5,000,000 is to be subscribed in equal amounts by the Federal Railways, and Centralschweizerische Kraftwerke.

The scheme is to be completed in three stages, of which the first two, requiring investments of fr. 200,000,000 approximately, within ten years. The total production of the new power station, including also the projected increases in the output of the existing power stations of Wassen and Amsteg (both north of Göschenen) to to total 420,000,000 kW. a year.

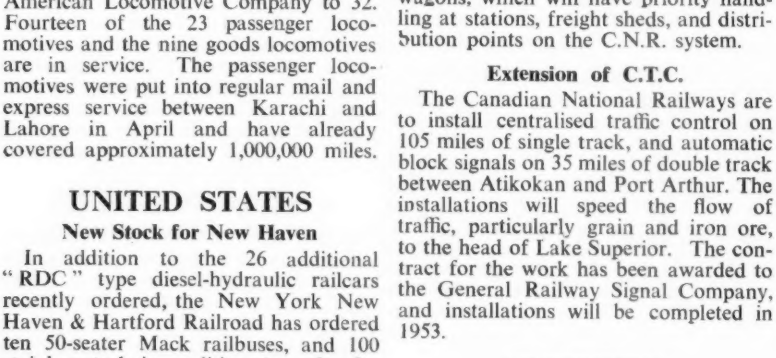
FRANCE

Checking Smalls

In an attempt to speed up unloading of smalls, the S.N.C.F. has experimented with systems to enable callers-off in wagons to identify packages and report details by telephone, or in some cases by a form of dictaphone, to staff in offices.

The dictaphone system has been in use for many months in the South Eastern Region at Lyon-Vaise, Grenoble, Clermont-Ferrand, and other points, and has made possible the preparation of delivery sheets under comfortable office conditions, with enhanced accuracy and clarity. It is estimated that a

Stockholm Underground Railway



Rådmansgatan Station on the recently-opened northern section of the Stockholm underground railway. (*See October 24 issue*)

40 per cent economy in checking staff has resulted from the use of this system.

Details have now become available of an installation at Paris-Batignolles, Western Region, whereby checkers in wagons call off details of packages into a chest microphone; the data are received over a telephone line by a clerk in the office, who can check them immediately against the waybills. The operation of a switch enables the clerk to talk back to the caller-off and to report inaccuracies.

Work at the terminal has been speeded up and accuracy improved, and it is estimated that a total of six employees, three in the office and three on the quays, can perform the work for which eleven staff were formerly required. Previously, unloading sheets prepared on the quay had subsequently to be checked against the waybills in the office. The simultaneous carrying out of both operations is a valuable aid to efficiency.

BELGIUM

New Station at Mons Opened

The old station at Mons, built in 1870, was destroyed in an air raid in May, 1944. Work on a new building was commenced in December, 1947. The central part and one wing were ready by June, 1950; but the whole of the new building was not completed until October 20 last. The event was celebrated by a Solemn Mass in commemoration of the Belgian railwaymen who were victims of the two world wars, and to whom two memorials have been erected on the main platform of the new station.

The new building has an overall length of 459 ft. and contains a booking hall with a floor area of 85 ft. × 46 ft. and 46 ft. high. A special feature of the building, which is mainly of reinforced concrete, is the suspension of the first floor from the roof so that the ground floor remains completely free from stanchions (other than those in the outer walls), resulting in great flexibility of the layout.

HUNGARY

Budapest Underground Railway

The Budapest underground railway, of which some details appeared in the August 18 issue, will comprise two diametrical lines (one east to west, the other south to north), and a circular line. As traffic analyses showed that the east-west route would attract the heaviest traffic, this route was accorded the highest priority. Both the eastern and western termini are situated in industrial areas; the line will also serve the most important main line stations.

The section now under construction is five miles long. Construction is made difficult by numerous subterraneous springs, and the crossing of the Danube, which is more than 300 ft. wide. Tunnelling proceeds simultaneously from a great number of working shafts, and the work is carried out in compressed air to keep the water out. Some 10,000 men are now engaged on these works which include the excavation of about 1,000,000 cu. m. of earth.

Orders have been placed for 100 bogie motor cars. The theoretical capacity of the line is assessed at 50,000 passengers an hour in each direction, compared with a tramway capacity of 10,800 passengers. The maximum speed will be 44 m.p.h., and the overall speed 19 m.p.h. so that the five-mile journey will take 16 min. This compares with a tram journey time of 1 hr., and a bus journey time of 35 min. The platforms will be nearly 400 ft. long. Each station will be equipped with three escalators, including one reversible escalator used during peak hours only.

IRELAND

Use of Matisa Tamper

C.I.E. is carrying out demonstration tests with a new Matisa ballast tamper, the first of its type to be used in Ireland, and built specially to run on the 5 ft. 3 in. gauge.

Publications Received

Laughs Along the Lines. No. 2. By S. Evelyn Thomas. London: Good Humour Publications Limited, 1281, High Road, Whetstone, N.12. 8½ in. × 5½ in. 64 pp. Illustrated. Paper covers. Price 1s. 6d. net.—In this collection of jokes and drawings with a railway background, most readers will recognise some familiar items, and it is noticeable that the drawings wear better than the jokes. The assortment provides numerous smiles, some entertaining memories of wartime and postwar railway vicissitudes, and a fund of anecdotes for public speakers.

Birmingham—Fifty Years On. By Paul S. Cadbury. Birmingham 30: Bournville Village Trust, Estate Office, Bournville. 10¼ in. × 8¼ in. 94 pp. Illustrated. Price 10s. 6d.—Mr. Paul Cadbury, a former member of the Birmingham City Council and of its Public Works & Town Planning Committee, and Secretary of the West Midland Group on Postwar Reconstruction & Planning, has tried in this short book to translate into non-technical language the plans for the Birmingham agglomeration. In treatment of railways, reference is made only to the main-line passenger stations. Although there are several plans for a single passenger station, served presumably by all lines, to be built underground between Worcester Street and the Bull Ring, because of its cost and because existing roads must be used for access, the present stations, New Street (L.M.R.) and Snow Hill (W.R.) are likely, he thinks, to remain. New Street probably will remain as it is "until the railways are electrified or some system of smoke extraction enables the engineers to cover it in completely." The tracks at Snow Hill will be lowered, eliminating gradients up from Moor Street at the London and from Soho at the Wolverhampton end. Mr. Cadbury does not discuss the suburban railway problem, which depends, however, on the type of motive power adopted for the several lines serving Birmingham, or indeed, the whole problem of railway routes; and his failure to deal with the problem of goods stations, yards, and locomotive depots detracts much from the interest of the book.

Correspondence and Mailing. By Fred J. Neale. London, W.1.: The Office Management Association Limited, 8, Hill Street. 32 pp. Illustrated, Price 6s.—The author, an Assistant Division Office Organiser of I.C.I. Limited, sets forth clearly some important considerations in this essential part of office work. Because the subject often is neglected as being unimportant, much inefficiency can go unnoticed and possible economies be ignored, as Mr. Neale shows, with some useful suggestions for improvement. The booklet contains an illustrated supplement describing various appliances of use in correspondence and depatch and office work generally.

Quenching of Steels.—A publication issued by Edgar Vaughan & Co. Ltd. outlines the changes which take place in steel during the heat-treatment process, and the relation of these changes to its resultant physical properties. The information provided is the result of considerable research and practice accumulated over many years. The subjects include the heating and coating of carbon steels, and water and oil quenching with its attendant problems.

Brown-Boveri Calendar. The calendar for 1953 of Brown Boveri & Co. Ltd., of Baden, Switzerland, contains photographs exceptionally well taken and reproduced in colour and monochrome of Swiss Alpine scenery at different seasons of the year, each appearing with the calendar for the month.

Colliery Rolling Stock and Equipment.—A comprehensive survey of various designs of colliery rolling stock and ancillary equipment is given in an illustrated brochure recently issued by John Ingham & Sons Ltd. The designs include flat and well bottom all-steel cars, a feature of which is simplicity of erection, effected by means of spigot and stocket joints. Designs are in strict conformity with N.C.B. requirements, and where standardisation has been adopted, designs can be duplicated to conform with existing details. Particulars are also included of aluminium alloy mine cars giving reduced tare weight, good resistance to corrosion and so on, together with man-riding cars with Sorbo rubber lined seats and Perspex windscreens. A series of diagrams giving various drawbar pulls with different cars is also included.

The Revised Transport Bill

Modified scope of the levy and greater freedom proposed for railways in quoting competitive rates

THE Government's Transport Bill, revising in several important matters the Bill published on July 8 this year, was presented to Parliament on November 5. It is introduced in an explanatory and financial memorandum as having as its main purposes to provide for the disposal of the British Transport Commission's road haulage property, to modify the position of the Commission in relation to charges, and to provide for the reorganisation of the British railways. The Bill also provides for the modification of the powers, duties, and composition of the British Transport Commission, and for a levy on certain goods vehicles and tractors used on the roads.

Disposal of Road Undertaking

Clauses 1 to 9 deal with the disposal of the Commission's road haulage undertaking. The Commission's road haulage undertaking, comprising some 40,000 vehicles with stores, depots, local offices, etc., is to be disposed of to private enterprise. The Commission will, however, be able to retain under company ownership and management a vehicle fleet one-fifth larger in unladen weight than the fleet of vehicles owned by road haulage companies in which the former railway and canal companies had a controlling interest before nationalisation.

For disposal the undertaking will be divided up into units (called " transport units " in the Bill) which will enable the buyers to engage in business as hauliers. Due account will be taken of the proper place of the small haulier in the transport system and the Minister's approval will be required to the disposal of a transport unit comprising vehicles more than 50 in number or more than 200 tons in unladen weight. Single vehicles may be disposed of as transport units. Vehicles comprised in transport units will carry with them the right to a 5-year "A" licence free of mileage restrictions.

The Minister will be able to authorise or require the disposal of vehicles or other property otherwise than as part of a transport unit. This will provide for the disposal of property which may not be suitable for inclusion in a transport unit. It will also enable any vehicle left over after the sale of units has ceased to be disposed of as chattels. Vehicles so disposed of, however, would not carry any right to an " A " licence. The Minister can also consent to the retention of property required for the proper functioning of other parts of the Commission's undertaking.

Road Haulage Disposal Board

As part of the machinery of disposal, a Road Haulage Disposal Board is to be set up. The Board will consist of six persons to be appointed by the Minister. Apart from the Chairman and Deputy Chairman, one person is to be appointed from among nominees of the Commission, and the remaining three after consultation with trade and industry, holders of " A " or " B " licences, and holders of " C " licences respectively. The Commission will be required to consult the Board and to act on lines settled from time to time with its approval. The approval of the Board will be required to invitations to tender for individual transport units, and to the acceptance or refusal of tenders.

The Board is not to approve the acceptance of a tender unless it is satisfied that the price is reasonable having regard to the property and rights which the purchaser will obtain, including the right to an unrestricted " A " licence. Any difference between the Commission and the Board as to the general lines on which the Commission is to act or as to the constitution of individual transport units or the acceptance or refusal of tenders for individual units is to be settled by the Minister.

The Board is to report the progress of disposal to the Minister at intervals of not less than six months and a copy of each report is to be laid before Parliament.

When the Minister considers that disposal has reached a sufficiently advanced stage, he may by order provide for the abolition of the Board, the winding up of its affairs, and the transfer of any of its functions so far as they remain to be exercised, to himself.

The Commission will not be required to dispose of the road haulage vehicles operated by the railways as part of their collection and delivery services.

The Commission will have the right to " A " licences free from mileage restriction for all goods vehicles belonging to it at the passing of the Act, but for any further licences will have to apply to the licensing authorities in the ordinary way under the Road & Rail Traffic Act, 1933.

Repeal of 25-mile Limit

The 25-mile limit will cease to have effect as from the end of 1954. The fixing of the date is a modification of the previous Bill, which said only that the limit was to be removed on a date to be appointed by the Minister.

Applicants for licences under the Road & Rail Traffic Act, 1933, will still have to demonstrate a public need for the services which they propose to provide. But where an objector alleges that suitable transport facilities already exist the onus of establishing this will rest on him and it will not be necessary as it is at present for the applicant to disprove it. In considering whether existing services are suitable, the licensing authority is to have regard to the relative efficiency, reliability, and adequacy of the existing facilities and of those which the applicant would provide and to all other relevant considerations, including the charges to be made.

Licensing authorities are to give special consideration to applications for licences where goods are to be carried partly by road and partly by rail or inland waterway without the need for unloading and reloading. This is intended to facilitate the use of containers or other means of using both road and rail or inland waterway for a through journey without the necessity for handling the goods themselves *en route*.

The Transport Levy

For the limited purpose of compensating the Commission for any capital loss and for costs arising from the disposal of the road haulage undertaking, the Bill provides for a transport levy, the proceeds of which will go into a Transport Fund controlled and managed by the Minister. The levy is no longer to be applied to making good to the railways any unavoidable loss of net revenue resulting from transfers of traffic from rail to road. Payments to the Commission will be made from this fund. When it is estimated that the balance in the fund will be sufficient to meet any outstanding liability to the Commission, no further levy will be collected, and the fund will be wound up.

From January 1, 1954, the levy is to be charged annually on goods vehicles other than those not exceeding 1 ton in unladen weight. Previously, the levy in the form originally proposed was to have come into effect on a day to be appointed by the Minister. As indicated in the White Paper on Transport (see our May 16 issue) the initial yield of the levy is to be some £4 million a year, which will entail a payment of 13s. 6d. for each quarter of a ton of unladen weight. There will be an extra charge for vehicles used to draw trailers and a separate scale for tractors.

A fixed total contribution of £1 million (instead of a sum determined by the Minister) is to be paid out of the levy in respect of the loss arising from disturbance suffered by the Commission while the road haulage undertaking is being disposed of. When the amount of the capital loss arising out of disposal has been ascertained, it will be amortised over a suitable period by equal annual instalments provided from the levy. It is intended that the period should be fixed according to the total amount involved in order to avoid any excessive charge on road transport.

The levy will be collected through

the existing machinery provided for collecting the licence duties chargeable under the Vehicles (Excise) Act, 1949.

Reorganisation of Railways

Clauses 14 and 15 of the Bill require the British Transport Commission to submit to the Minister within twelve months of the passing of the Act a scheme for the reorganisation of that part of its undertaking which consists in the operation of the railways. It is now required that the scheme be made available for public inspection and purchase and that the Minister should consider any views expressed to him by bodies representative of those likely to be affected.

The clauses on reorganisation of railways read as follow:—

14.—(1) Within twelve months from the passing of this Act or such longer period as the Minister may allow, the Commission shall prepare and submit to the Minister a scheme for the reorganisation of that part of their undertaking which consists in the operation of the railways.

(2) The said scheme shall provide:—

(*a*) for the abolition (if it has not already been abolished) of the Railway Executive; and

(*b*) for the setting up, for such areas as may be specified by or under the scheme, of such authorities as may be so specified; and

(*c*) for the delegation to those authorities of such functions of the Commission relating to that part of their undertaking as may be so specified in relation to those authorities respectively.

(3) The said scheme may provide:—

(*a*) for the setting up of other authorities and for the delegation to them of such functions of the Commission relating to that part of their undertaking as may be specified by or under the scheme, being functions which appear to the Commission or to the Minister to be unsuitable for delegation to an authority set up for a particular area;

(*b*) for the setting up for the purpose:—

(i) of co-ordinating the exercise and performance of their functions by all or any of the authorities set up under the scheme, whether for areas or otherwise; and

(ii) of making provision for matters of common interest to all or any of those authorities,

of co-ordinating authorities.

(4) The said scheme may provide for regulating:—

(*a*) the relations of the authorities set up under the scheme with each other;

(*b*) the relations of those authorities with the Commission; and

(*c*) the relations of those authorities with persons other than the Commission,

and for giving to the Commission such powers of control over those authorities as may be specified by or under the scheme.

(5) The authorities to be set up under the scheme may be individuals or bodies of persons, whether corporate or unincorporated, and the scheme may provide for the incorporation of any of those authorities.

(6) The scheme may:—

(*a*) entrust to any authority set up under the scheme, or otherwise deal with, functions of the Commission not concerned or directly concerned with the operation of the railways if it appears to the Commission or to the Minister to be necessary or expedient that those matters should be entrusted to those authorities or so dealt with by the scheme;

(*b*) authorise any such authority set up for an area to operate, as respects particular matters specified by or under the scheme, outside its own area either concurrently with, or to the exclusion of, any authority within the area of which the operation takes place;

(*c*) contain such incidental, consequential and transitional provisions as may appear as aforesaid to be necessary or expedient, including provisions amending or applying, with or without modifications, any statutory provision.

(7) Nothing in the preceding provisions of this section shall be taken to require that all functions of the Commission relating to the operation of the railways shall be entrusted to authorities set up under the scheme or as requiring that all functions of the Commission relating to the operation of the railways shall be dealt with in the scheme, and, in particular, the scheme shall be such as will, in the opinion of the Commission or of the Minister, reserve to the Commission general financial control and general control of the charges to be made for the services and facilities provided.

(8) Without prejudice to the provisions of subsection (7) of this section, the scheme under this section need not deal with all or any of the railways the operation of which forms part of the passenger transport services provided at the passing of this Act by the London Transport Executive.

Scottish Organisation

(9) In relation to Scotland, for the requirement in paragraph (*b*) of subsection (2) of this section there shall be substituted a requirement that the scheme shall provide for an authority for the whole of Scotland (with or without authorities for areas in Scotland) and, in relation to the authority for the whole of Scotland, references to Scotland shall, in the provisions of this section subsequent to the said subsection (2), be substituted for the references to the areas of the authorities set up under the said subsection (2).

Approval of Schemes

15.—(1) When the Commission submit a scheme under the last preceding section to the Minister, they shall arrange for a sufficient number of copies thereof to be open to inspection by the public and to be put on sale to the public at a reasonable price.

(2) On any such scheme being submitted to the Minister, the Minister shall publish, in such manner as he thinks suitable, notice of the submission of the scheme, of the places where copies may be inspected and purchased, and of the time within which objections and representations with respect to the scheme may be made to him (being objections or representations made by bodies representative of classes of persons likely to be specially affected by the scheme or made by the National Coal Board) and, on the expiration of the said time, may by order approve the scheme, either without modification or with such modifications as he may, after consultation with the Commission, think fit, and the scheme, as so approved, shall come into effect as from such date as may be specified therein.

(3) Any scheme approved as aforesaid may be amended or revoked by a subsequent scheme prepared and submitted by the Commission, and the preceding provisions of this section shall have effect with respect to any such subsequent scheme.

(4) Any scheme approved as aforesaid may also be amended or revoked by an order of the Minister made after consultation with the Commission:

Provided that, before making any such order, the Minister shall publish in such manner as he thinks suitable notice that he intends to make the order, of the places where copies of the draft of the order may be inspected and purchased, and of the time within which objections and representations with respect to the order may be made (being objections or representations made by bodies representative of classes of persons likely to be specially affected by the order or made by the National Coal Board), and, on the expiration of the said time, the Minister may make the order with such modifications, if any, as he thinks fit.

(5) The references in subsections (3) and (4) of this section to the amendment of a scheme include references to the revocation thereof and the substitution of a new scheme, and any scheme so substituted shall be deemed to be a scheme under the last preceding section.

(6) The power conferred by this section on the Minister to make orders shall be exercisable by statutory instrument, and any such statutory instrument shall be subject to annulment in pursuance of a resolution of either House of Parliament.

(7) Before exercising his powers under this section in any case affecting Scotland, the Minister shall consult the Secretary of State for Scotland.

Road Passenger Transport

The Transport Act, 1947, provided for the submission to the Minister by the Commission of area road transport schemes which were intended to promote the co-ordination of the passenger transport services serving the area whether by road or by rail, and the Commission was required to review the passenger road transport services operating in Great Britain with a view to determining the areas to which such schemes should be applied.

It is now proposed in Clause 16 of

the Bill to repeal the provisions of the Act of 1947 with regard to such schemes. The Commission will still have power to operate omnibuses directly, and if they wish to do so they will have to apply for licences like any other operator. These provisions will not apply to the bus services of the London Transport Executive, which have been exempt from this necessity since the London Passenger Transport Board was set up under the London Passenger Transport Act, 1933.

The Commission is not to be allowed to run contract carriages on roads outside a radius of 10 miles nor in the County of Kent 5 miles from any point on the boundary of the London Passenger Transport area except for the purpose of carrying pleasure parties consisting of employees of the Commission and their families and friends.

Commission's Bus Undertakings

The Commission is not to have power to acquire further bus undertakings nor, without the consent of the Minister, any securities the acquisition of which would bring such undertakings under the control of the Commission. Where the Commission already has control of a bus undertaking through shareholding, the company structure of the undertaking is to be maintained.

The Minister is further empowered, where the Commission exercise control of an omnibus undertaking through shareholding, to require the Commission to divest itself of this control by the disposal of a sufficient part of such securities.

Road passenger services provided by companies controlled by the Commission are to be deemed to be services provided by the Commission for the purpose of bringing them within the purview of the Consultative Committee set up under the Transport Act.

Trade Harbours

The Bill, in Clause 17, proposes to repeal the powers under the 1947 Act for the Commission to submit to the Minister schemes for securing the efficient and economic development, maintenance or management of any trade harbour or group of trade harbours and to keep such harbours under review with a view to determining whether its powers should be exercised with respect to any harbour or group of trade harbours.

Charges Procedure

The new proposals (Clauses 18-23) give the railways greater freedom to quote competitive rates than was previously proposed. Among the restrictions to be removed are those relating to equality of charges, undue preference and agreed charges. Moreover, the present obligation to publish charges will apply only to maximum charges.

The Commission will still be required to submit charges schemes to the Transport Tribunal in respect of its principal activities (other than road haulage and canal carriage), but the Bill provides in Clauses 18-23 for a much greater latitude in the adjustment of charges in order to enable the railways to compete on fairer terms with road.

Under the 1947 Act the Transport Tribunal is empowered to require a scheme to provide for fixed charges, maximum charges, or standard charges, and to impose any conditions which they think fit in relation to charges.

Under the proposals in the Bill a charges scheme is not to provide for fixed or standard charges but only for maximum charges or, where the fixing of a maximum charge appears not to be reasonably practicable or to be undesirable, for reasonable charges. Subject to this, a scheme has to leave the charges to be made to the discretion of the Commission without the imposition of any conditions or limitations on that discretion. The Commission will have to publish the maximum charges but will not have to publish any other charges.

The Commission's charges will cease to be subject to certain statutory provisions relating to equality of charges, undue preference, protection for harbour authorities, and coastwise shipping, charges agreed with individual traders, and charges for carriage by inland waterways. In order, however, to protect traders against unreasonable or unfair charges, and competitors of the Commission against uneconomic charges designed to eliminate competition, the Bill contains clauses enabling them to make complaints to the Transport Tribunal. Any person desiring to send merchandise by railway in circumstances in which it cannot reasonably be carried by any other means of transport will be able to complain that the charge which he is, or will be, required to pay is unreasonable or unfair. Complaints will also be able to be made, by carriers of goods for hire or reward, in regard to the Commission's charges for the carriage of merchandise by railway, and by harbour authorities in regard to such charges and to the Commission's charges for port facilities, on the ground that the charges, if continued, must result in a loss to the Commission and are being made with a view to eliminating competition.

Temporary Authorisation of Increases

Consideration by the Transport Tribunal of an application under normal procedure for alterations in charges schemes is inevitably a long process because the application must be published, time must be allowed for the lodging of representations, and a public inquiry must be held. If, therefore, the Commission has to apply for alterations in schemes to authorise an increase in its charges required to meet a substantial increase in its costs, the Commission may rapidly accumulate a substantial deficit while its case is being considered.

The Bill accordingly provides that the Commission may, in such circumstances apply to the Transport Tribunal for temporary amendments of the schemes. The Tribunal is to consider the application as quickly as possible, *ex parte*, and in private. If satisfied, the Tribunal will authorise temporary amendments of the schemes which will produce not more than 10 per cent additional revenue from any scheme. The Commission will then be required as soon as possible to apply for alterations in the schemes in the usual way. This application will be subject to the normal publication, representations, and public inquiry. When the Tribunal determines it, it will also make an Order terminating the temporary amendments made under the interim application.

Commission Membership and Functions

Clause 24, "Amendments as to General Duty and Constitution of Commission, Etc.," now omits the former section 3, requiring the Chairman of the Commission to keep the Minister at all times adequately informed as to all matters which are material to be known to him for the purpose of enabling him properly to discharge his duty as Minister. The clause and its sub-paragraphs are now as follow:—

24.—(1) For subsection (1) to (3) of section three of the Transport Act, 1947 (which relates to the general duty of the Commission), there shall be substituted the following subsection:—

"(1) It shall be the general duty of the Commission, in the exercise of their powers under this Act:—

(*a*) to provide railway services for Great Britain;

(*b*) to provide or secure the provision of an adequate and properly coordinated system of passenger transport for the London Passenger Transport Area;

(*c*) to provide, in such places and to such extent as may appear to the Commission to be expedient, other transport services and facilities for traffic on inland waterways; and

(*d*) to provide, to such extent as may appear to the Commission to be expedient, port facilities in such places as may appear to them to be expedient, being places in which they were providing port facilities on the first day of July, 1952, or had, on the said first day of July, power otherwise than by reason only of section two of this Act to provide port facilities,

due regard being had, as respects all the services and facilities mentioned in this subsection, to efficiency, economy, and safety of operation and to the needs of the public, agriculture, commerce, and industry."

(2) The following provisions shall have effect as respects the membership of the Commission:—

(*a*) the maximum number of members of the Commission other than the chairman shall, instead of being eight, be ten;

(*b*) so much of subsection (2) of section one of the Transport Act, 1947, as requires not less than four members other than the chairman to render whole-time service to the Commission is hereby repealed and accordingly only the chaiman and such other members,

if any, as the Minister thinks fit shall be required to render whole-time service to the Commission;

(c) in exercising the powers exercisable by him under or by virtue of the said section one, the Minister shall have regard to the desirability of securing that the members of the Commission include:—

(i) persons who between them have had experience in the management of railways and road transport; and

(ii) a person who has had experience in the organisation of workers; and

(iii) persons who, otherwise than by virtue of such experience as is mentioned in sub-paragraphs (i) and (ii) of this paragraph, may between them be expected to be conversant with the requirements, as respects transport, of agriculture, commerce and industry.

(3) The power conferred on the Minister by subsection (3) of section five of the Transport Act, 1947, to make provision as to the number and names of the Executives shall include power to provide that there shall be no Executives.

Borrowing Powers Increased

The increased borrowing powers proposed in the earlier Bill are retained in Clause 25 (1) of the new Bill, the limit for purposes other than redeeming Transport stock or repaying temporary loans being £275 million.

Other Activities of Commission

Clause 25 (2) enables the Minister to authorise or direct the Commission, in the interests of national defence, to engage in activities from which it is otherwise barred, the terms of the clause being as follows:—

(2) The Commission shall have power to engage in any activities which the Minister may from time to time think fit in the interests of national defence to authorise or direct them to engage in, and the limitations imposed by the provisos to subsections (2) and (3) of section two of the Transport Act, 1947, and by subsection (4) of that section shall not apply to any such activities:

Provided that the Minister shall not authorise or direct the Commission to engage in any form of activity falling within the scope of the said limitations unless he is satisfied that, unless he gives the direction or authority, work required in the interests of national defence cannot be carried out or cannot be carried out without serious risk of undue delay or of loss of efficiency.

(3) For the purposes of section forty-two of the Finance Act, 1930 (which gives relief from stamp duty in the case of a transfer of property as between associated companies with limited liability), the Commission shall be deemed to be a company with limited liability.

Pension Rights and Compensation

The disposal of the Commission's road haulage undertaking will not reduce the amount of haulage work to be done in the country, but some disturbance of employment is bound to result as it did in the course of the taking over by the Commission of road haulage undertakings under the Transport Act, 1947. Provisions similar to those contained in the Transport Act are accordingly included in Clauses 26 and 27 for the protection of those who may be adversely affected.

Under these provisions the Minister will be empowered to make regulations with respect to pensions in the case of those persons who enjoy pension rights as employees of the Commission, but are displaced as a result of the disposal of the road haulage property, or of the modification of the Commission's functions by the Bill. The Minister is also required to provide, by regulations, for the payment of compensation to officers and servants of the Commission who suffer loss of employment or loss or diminution of emoluments or pensions rights or whose position is worsened as a result of those causes.

Scottish Consultative Committee

The special position of Scotland is recognised in the Bill. It is provided in Section 6 of the Transport Act, 1947, that there shall be a Transport Users Consultative Committee for both passenger and goods traffic for Scotland, whether or not there are Committees for parts of Scotland. Under that Act the Scottish Committee is required to send copies of its minutes and of its recommendations to the Central Transport Consultative Committee for Great Britain. The Central Committee has to send copies of its own minutes and recommendations to the Minister and the Minister is empowered by the Act to give such specific directions to the Commission with respect to the matters dealt with by the recommendations of the Central Committee as he thinks fit.

Under Clause 28 of the new Bill copies of the minutes and of any recommendations or conclusions of the Scottish Committee are to be sent direct to the Minister as well as to the Commission and the Central Committee; and the Minister will have the same powers to give directions to the Commission in regard to these recommendations as he now has in connection with those sent to him by the Central Committee.

Under the Act of 1947, the Committee is empowered to consider any matter which appears to it to be one to which consideration ought to be given, whether or not representations have been made to them about it. Under the proposed amendment, therefore, the Committee will be in a position to submit recommendations directly to the Minister on any matter affecting the Commission's services in Scotland, and the Minister will be empowered to give directions to the Commission on it.

The composition of the Scottish Committee will be reviewed when the Bill becomes law.

Welsh Consultative Committee

Section 6 of the Transport Act, 1947, provides that there shall be a Transport Users Consultative Committee in respect of both passenger and goods traffic for Wales. Clause 28 (1) of the new Bill provides that this Committee shall cover Wales and Monmouthshire.

Copies of the recommendations, minutes and conclusions of the Committee for Wales and Monmouthshire will in future be sent direct to the Minister as well as to the Commission and the Central Committee, and the Minister, as in the case of the Scottish Committee referred to immediately above, will be empowered to give specific directions to the Commission with respect to any matters dealt with by such recommendations. At present such directions can be given by the Minister only with respect to recommendations made by the Central Transport Consultative Committee for Great Britain.

NO SEGREGATIONS ON U.S.A. RAILWAYS: SUPREME COURT RULING.—The United States Supreme Court has upheld a ruling that "Jim Crow" coaches, for the use of negro passengers only, are unconstitutional. This decision is a result of an action by a negro schoolteacher after being evicted from a railway coach in June, 1948. He had refused to change from a "white" to a "negro" coach. As a result U.S.A. railways may no longer require negro passengers to travel in coaches separate from those of white passengers. When the schoolteacher refused to change coaches, he was arrested by local police for disorderly conduct. He sued the railway company and the conductor who put him off for £9,000, and was awarded £18; but it was ruled that the railway's segregation regulation was valid and reasonable. A Court of Appeals reversed this latter ruling, and the Atlantic Coast Line Railroad appealed against the decision, which was upheld by the Supreme Court.

HERRING TRAFFIC BY HARWICH-ZEEBRUGGE TRAIN FERRY.—The Eastern Region of British Railways has this year been successful in securing to the Harwich-Zeebrugge train ferry service a portion of the fresh herring traffic to the Continent. The bulk of this long-established traffic from Yarmouth and Lowestoft has, for many years, gone by the direct sea route with only an occasional wagon by the train ferry service. This season, however, the first consignments *via* Harwich passed from Yarmouth and Lowestoft on Friday, October 24. Details of the traffic are given below:—

FRESH HERRINGS IN BOXES

Weight	Forwarding point	Destination
10 tons	... Lowestoft	Belgium
24 tons	... Lowestoft	Germany
29 tons	... Yarmouth	Germany
10 tons	... Yarmouth	Austria

The Yarmouth wagons were despatched on a special train at 1.15 p.m. on October 24, and connected at Beccles with a special train which left Lowestoft at 1.35 p.m. The combined traffics reached Harwich at 4.25 p.m. and after Customs clearance the wagons were placed on board the *Essex Ferry*, which sailed at 8 p.m. on the same day. The Belgian consignment was delivered locally at Zeebrugge and the six German and one Austrian consignments went forward from Zeebrugge at 2 p.m. on Saturday, October 25. This traffic for Germany and Austria is controlled by United Fresh Herring Exporters Limited.

Confines of Braking—3*

Factors influencing coefficient of friction between block and wheel

By H. R. Broadbent, B.Eng.

PART 2 of this article concluded with a discussion of brake rigging efficiency. The factors now to be considered are the brake block itself, and the various conditions of control between wheel tyre and block.

Brake Block

In general the variation in brake block dimensions in manufacture can have but little effect on the block characteristics. Designed differences in size can however appreciably alter the temperature on a tyre surface during braking† and for that reason may alter its frictional characteristic. Once determined, however, it is probable that there is little difference between block and block on account of dimensional variation.

Variations in mix with non-metallic blocks may account for differences between block and block under test. The effect of scatter has not been analysed, but since each axle generally has four blocks, in practice the variations will tend to even out.

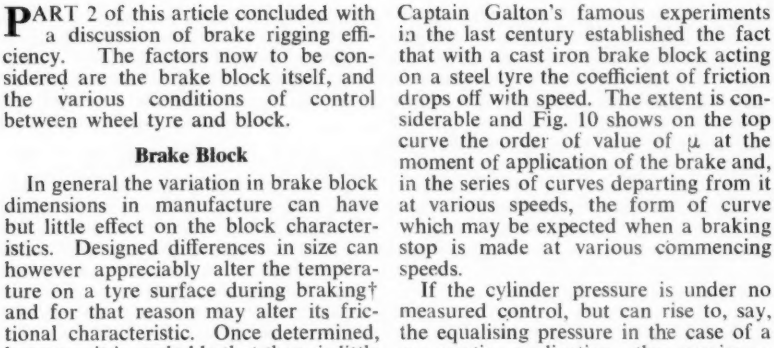


Fig. 10—Change in coefficient of friction (μ) between block and wheel during stops from various speeds

Block and Wheel

The variations in braking which occur through the mutual contact of wheel tyre and block are as follows:—

Variation of the Coefficient of Friction (μ) of a Brake Block with Speed.—Captain Galton's famous experiments in the last century established the fact that with a cast iron brake block acting on a steel tyre the coefficient of friction drops off with speed. The extent is considerable and Fig. 10 shows on the top curve the order of value of μ at the moment of application of the brake and, in the series of curves departing from it at various speeds, the form of curve which may be expected when a braking stop is made at various commencing speeds.

If the cylinder pressure is under no measured control, but can rise to, say, the equalising pressure in the case of a pneumatic application, the maximum value must be calculated on the basis of the maximum μ, in practice the coefficient at about 5 m.p.h. The braking force which can be obtained from the same brake cylinder pressure at a high speed will be reduced in the ratio of the coefficient of friction at the two speeds; or in the ratio of 0·10/0·27, or to 37 per cent, at 60 m.p.h.

This factor of reduction in coefficient of friction with speed, when cast iron brake blocks are used, is probably the greatest deterrent to maximum braking with the majority of the stock in this country. It has a secondary effect in relieving the rate at which work is being done at the high speed, and thus reducing the demands on the tyres, but this takes place only at the expense of the long stopping distances, with their evident reactions on sections occupied, and timetables.

With non-metallic, composition, brake block materials the characteristic is flatter and research in this direction shows indications of finding a characteristic which can be controlled to a much greater degree than at present. It is possible that friction materials, or mixtures of various friction materials, with a flat characteristic will be found, but with an increase in cost of production. Against this higher cost can be set the saving in apparatus which is now used to compensate for the variation in coefficient of friction of the present materials.

The characteristic of a cast iron block, where the coefficient rises at the lower speeds, increases the tendency of a wheel to pick-up and lock, once slowing-up has begun on the rising part of the curve. Wooden brake blocks, as used on the Paris Métro urban sections, have a characteristic in which the coefficient drops off as the speed decreases. Should the wheel therefore slow-up because the braking force on an axle is too high for the adhesion, it can be observed that, at some point during the process, the wheel will speed up and again run at normal speed. This slowing-up followed by a recovery may take place several times during a stop. The same phenomenon has been observed with a non-metallic material, but not with such frequency during a stop.

Block μ and Applied Force.—A further factor which must be taken into account as a limiting variation is the change which can take place in the ratio of frictional force to applied force. With some types of non-metallic material the ratio decreases with increase in applied force. With a material of this type the reason may lie in a reduction in force per unit area with the rise in total force, but whatever the reason, if expressed as a coefficient of friction, a definite fall can be found. With controlled braking, where an increase in applied force is used to counter a fall in block friction with speed or for passenger loading, the effect may be important, particularly as the drop may differ between free or lightly loaded axles, and heavily loaded driving axles.

Block μ and Tyre Temperature.—With composition non-metallic materials very high temperatures may be reached and with some types "fade" occurs. It is important therefore in brake design to know the characteristics of the braking material, whether metallic or non-metallic, when hot, if special requirements to cover for "fade" are to be avoided.

Block μ and Weather.—If all braking were to take place in the dry, the problem of braking would be easier. Weather affects both the coefficient of rolling friction between wheel and rail and also the coefficient of friction between block

* Part 1 of this article appeared in our October 31 issue and Part 2 in our November 7 issue

† "The Measurement of the Temperature of Sliding Surfaces with particular reference to Railway Brake Blocks," by R. C. Parker, Ph.D., B.Sc., and P. R. Marshall, Ph.D., B.Sc., Proc., Institution of Mechanical Engineers, Vol. 158 (1948)

and tyre. With cast iron the block μ is hardly, if at all, affected by wet, but with non-metallic materials μ rises with some and drops with others, while at the lower values of applied force the brake friction can fall off very rapidly. Since, however, we are concerned with maximum braking the lower values are not of immediate interest. The drop in friction at the higher values under wet conditions can, however, with some materials, be sufficient to call for considerable increase in applied force as compensation for drop in μ. If no extra pressure is available the rate of braking will fall.

If the fall in block μ could exactly equal a drop in adhesion under wet conditions, automatic compensation would take place, but it would be disconcerting for a driver to have two rates of braking, one for wet and one for dry conditions, with critical unstable conditions in transition. In practice, the settings for braking are designed for wet conditions and it is important therefore that the characteristic of the block should not change unduly between dry and wet. If there is to be a choice, it is better to have a slightly falling characteristic under wet conditions. A rising characteristic would tend to increase any tendency to pick-up.

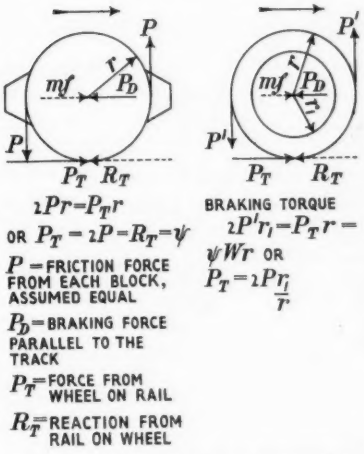


Fig. 11 (left)—Constant interacting circumferential force between wheel and rail with block braking; and Fig. 12 (right)—Variation of force between wheel and rail with other forms of torque braking

Effect of Wheel Diameter with Drum, Disc and Dynamic Braking.—With torque braking where the frictional force is applied at the tread of the wheel, as in the usual form of block braking, any change in wheel diameter is automatically compensated for in the torque.

This effect can be seen from Fig. 11. It will be noted that the reaction from rail to wheel = $2P$ and, assuming a constant coefficient of friction and applied force, the interacting circumferential force between wheel and rail remains constant with all wheel diameters and is limited only by ψ.

With other forms of torque braking, however, where the diameter of application remains practically constant, it will be seen from Fig. 12 that the force between wheel and rail varies as $\frac{r_1}{r}$ or with r_1 constant, as $\frac{1}{r}$. If pick-up is to be avoided it will be necessary to design on the basis of a fully-worn wheel with a resultant decrease, amounting in some cases to 10 per cent with a new wheel. The alternative is some form of adjustment of torque with change in wheel diameter, thus narrowing the percentage decrease.

It should be noted in the above that the friction force P is not the full force as a proportion has been used in retarding the rotating parts.

(To be continued)

Light Diesel Units for British Railways

Services in Yorkshire to initiate programme

BRITISH RAILWAYS are to introduce multiple-unit diesel trains for passenger traffic. With the approval of the British Transport Commission, the Railway Executive is undertaking an immediate first expenditure of up to £500,000 on this programme. This is the first practical step in the policy of using lightweight diesel units wherever suitable to reinforce or to replace steam services.

The first area which it is proposed to serve by the new diesel trains will be the West Riding of Yorkshire, where, it is considered, new and frequent services by diesel units between certain large centres of population will be most effective in improving rail services and developing travel. The West Riding has been chosen first because centres such as Bradford and Leeds form good natural bases for a fleet of diesel units operating over a series of inter-connected lines through busy industrial areas. The diesel services to be operated in this area are now being worked out. A number of other areas, including Scotland, has been surveyed for development later.

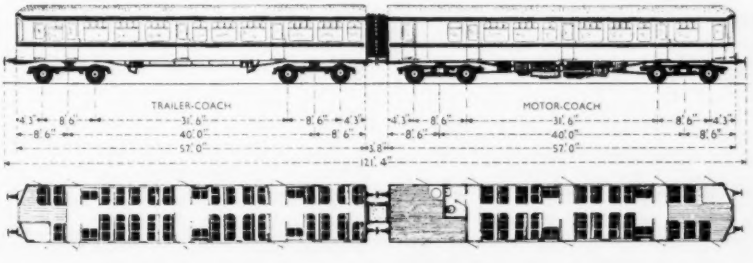
The diesel trains intended for the West Riding are likely, subject to practical test, to become standard for the whole country. They are now being designed under the supervision of Mr. R. A. Riddles, Member of the Railway Executive responsible for Mechanical & Electrical Engineering.

Each of the new units will consist of two coaches—and either one or both of the vehicles will be powered by two 125-h.p. bus engines, according to the power requirements of the different services; the engines will be located under the floor. These units will be capable of being driven from either end and of being run either as a 2-coach train or as part of a train of up to four units (eight vehicles) all coupled together. Mechanical transmission will be used, and in accordance with modern trends in design, the cars will be of lightweight construction, the body and underframe being made together. Seating will be on bus principles, with a good look-out for passengers; each unit will have toilet accommodation, and space for parcels and luggage, and will be heated.

British Railways have kept in close touch with more recent developments of diesel traction in Northern Ireland, the Republic of Ireland and overseas. Last year, the Railway Executive made a full-scale survey of the possibilities of introducing diesel units in this country on the type of work for which they are likely to be most suitable and most economic. The survey included an on-the-spot investigation of diesel development in France, Belgium, Germany, and Ireland.

The new diesel units will be employed on routes where they can be fully engaged on passenger work and where they will be able to take care of the heavy fluctuations (characteristic in Britain) as between, for example, mid-week and the weekend.

It is intended to place the first contract for the provision of power equipments for 16 motor car units with Leyland Motors Limited, Leyland, Lancashire, who will supply the engines; and with Walker Bros. (Wigan) Ltd., of Wigan, who will supply the transmissions.



Proposal for dimensions and seating of a two-car unit

The North Borneo Government Railway

A metre-gauge Colonial system restored and improved after wartime damage

THE North Borneo Railway is of metre gauge and has a route-mileage of 116 miles. The main line from Jesselton to Beaufort, 57 miles in length and roughly parallel to the west coast of the Colony, was being brought up to a 12-ton axleload standard before the war.

Since then the remaining 23 miles have been relaid with 60-lb. rails and other measures have been taken to complete the achievement of that standard. All this was in accordance with a decision by a post-war Transport Commission, representing all interests, to retain the railway in preference to its formation being used for roads, and to adopt this standard for the main line only.

An editorial article entitled "Railway Rehabilitation in the Colonies," in our June 20 issue, included a summary of a paper by Mr. H. Gatford, General Manager of the North Borneo Railway, describing the rehabilitation of the system. From his paper, which was read before the Institution of Civil Engineers, on behalf of the author, by Mr. D. C. Brown, Deputy Chief Mechanical Engineer, Crown Agents for the Colonies, the following information is largely obtained.

From Beaufort there is an extension turning inland and running up the Padas River Gorge *via* Tenom, a civil district headquarters, to Melalap, about 40 miles from Beaufort. From the Melalap railhead a road runs onwards some 24 miles to the Keningan Plain in the interior.

At Beaufort there is a ferry over the Padas River, on the left or farther bank of which is the terminal of a 20-mile branch line to Weston, a small port, whence the island port of Labuan is reached by sea. Construction of the line from Weston to Beaufort was begun in 1900, and was followed by the Beaufort—Jesselton section, completed about 1902. Both the Padas Gorge extension and the Weston branch are laid with the 30-lb. track and in all respects only up to 6-ton axleload standard.

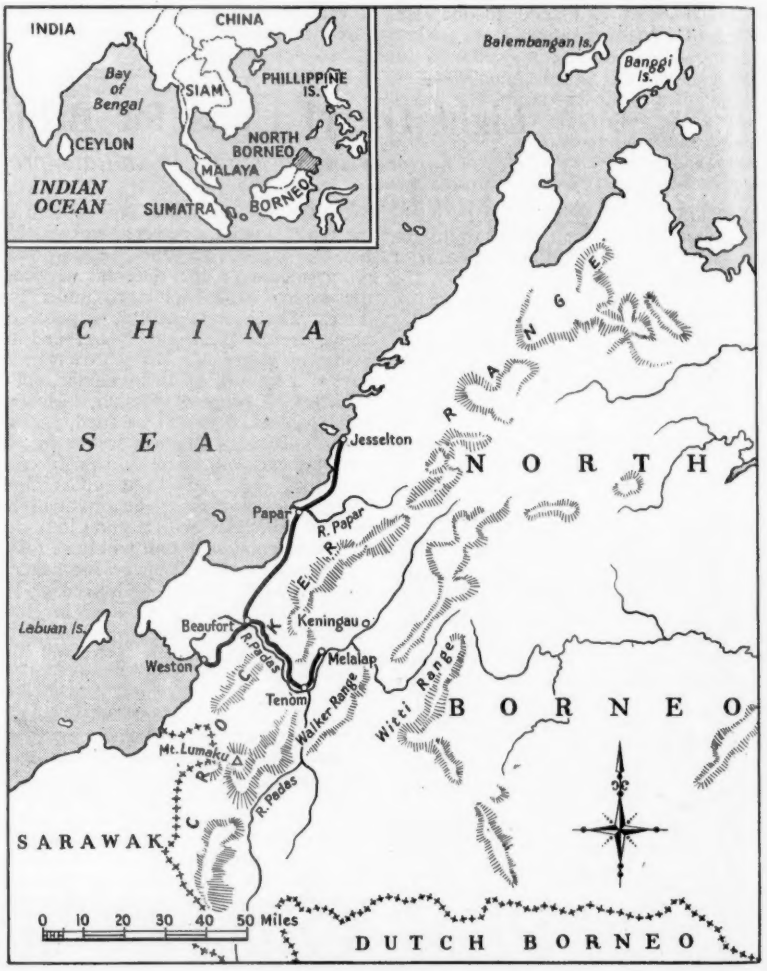
Damage to Bridges

On the main line all the ten major bridges were put out of action, with at least one span destroyed, during the war. Nine had plate-girder superstructures supported by screw-piles, but the tenth, over the Papar River, consisted of four through Pratt-truss spans each of 100 ft. resting on 7-ft. twin-caisson piers and abutments. The central pier, No. 3, was sheared off under water—it is believed by a demolition party from a submarine—with the result that one end of span No. 2 and the whole of span No. 3 fell into the river. The caissons of pier No. 4 were leaning too much to allow restoration.

Span No. 2 was cut up and removed piece-meal, but span No. 3 was submerged too deeply and—together with the stumps of the caissons cut down to low water level—had to be enclosed in a ring of 55-ft. concrete piles bonded into the tops of the caisson stumps. The caisson stumps of pier No. 3 were surrounded concentrically by new 10-ft. caissons concreted round them to act as sleeves, but underwater snags necessitated the driving of four piles between the old and new caissons, in place of concreting. Spans Nos. 2 and 3 were replaced by Callender-Hamilton spans —left in the Colony by the military— which were launched telescopically from span No. 1.

For most of the other major bridges, the multiple plate-girder spans were replaced by single 100-ft. Callender-Hamilton spans on concrete piles. Timber piles are quickly destroyed by Teredo borers.

Another work of interest in the improvement of the main line was the enlargement and lowering of Penlagat Tunnel, 20 miles from Jesselton. This tunnel was previously a double bottleneck in that its width was 10 ft. instead of the standard 13 ft., so that only sub-standard locomotives and stock could pass through it, and the gradients of both its approaches were 1 in 66, whereas the ruling gradient of the rest of the main line was 1 in 100. The width is now 13 ft., and the maximum extent of the lowering was 3 ft. 9 in. Passengers were warned that its scant width made it dangerous for them to put their heads out of the carriage windows. The warning consisted of two rows of ropes suspended from a special framework on each approach to the tunnel and 10 ft. apart, 5 ft. on each side of the track centre line. Heads protruding from windows would there-



The North Borneo Railway

Hunslet-built diesel locomotive

fore strike the warning ropes and be withdrawn before the tunnel portal was reached.

Padas Gorge and Weston Lines

The Padas Gorge section is in difficult country, and the railway runs along a ledge just above the river; there are steep hillsides on its northern side or the side away from the river. It is a constant anxiety to the Engineering Department because of frequent landslides and trees falling across the line. There were more than 40 slips in 1951, one of them blocking the line for three weeks. In 1934 many slips and washouts extending over several miles closed the line for eight months. The Weston branch runs largely through swampy country. One of the accompanying illustrations shows a causeway built of pitching stone thrown across a swamp to carry the railway.

For buildings, stone is difficult to obtain within economic distances and new permanent structures are mostly of concrete. Many, including the headquarters offices illustrated, are, however, replacements of those demolished during the war and now constructed in timber with palm roofing as a temporary measure.

After their occupation of the country, the Japanese left all the locomotives and almost all of the rolling stock unusable. On re-occupation, the Australian army maintained essential traffic for the first year or two with a number of rail jeeps and Malcolm Moore locomotives. Since then repairs have enabled seven of the pre-war steam locomotives to return to service, and recent additions to the stock have been one 50-h.p. Fowler and two 130-h.p. Hunslet diesel locomotives, and two 52-seat and four six-seat Wickham railcars. There are also 155 wagons of all types and 24 passenger coaches in commission. Altogether the outlook is now considered satisfactory and the general outlook hopeful, especially in view of the prospective development of the hinterland, and the possible production of coal and of hydro-electric energy from a favourable dam site in the Padas Gorge.

Causeway of pitching stone carrying the Weston branch across a swamp; a telegraph pole has collapsed and is being propped up

Temporary headquarters offices in timber with palm thatching, replacing permanent buildings destroyed during the war

We are indebted to Mr. D. C. Brown for the photographs reproduced.

OFFICE LIGHTING UNITS.—An entirely translucent all-glass lighting unit embodying a glass canopy, and based on the Holophane system of prisms, has been developed by Holophane Ltd. for use in offices and similar commercial situations where good appearance combined with high photometric efficiency are essential features. The units, to be known as Lumilux, have clean and modern lines, the patterns of the prisms being specially chosen to give a degree of sparkle when the lamp is lit, while the luminance of the fitting as a whole has been controlled to eliminate glare under all normal conditions. A feature of the fitting is the combined glass canopy and reflector which forms a single moulding.

E

"YP" Locomotives for India

Metre-gauge engines for main-line passenger services

IN June, 1952, the North British Locomotive Co. Ltd. delivered the first of an order for 100 locomotives for the Indian Railways. These locomotives, of 4-6-2 "YP" class, are for passenger train operation and were built to the design and requirements of the Central Standards Office, Ministry of Railways, Chittaranjan, and under the supervision of the Consulting Engineers, Messrs. Rendel, Palmer & Tritton.

Boiler Particulars

The boiler barrel consists of two rings, the first of which is tapered and the external diameters at front and rear are 4 ft. 9 in. and 5 ft. 2 in. respectively. The longitudinal seams are treble riveted with inside and outside butt strips and the circumferential seams are double riveted. The distance between the tubeplates is 12 ft. 10¾ in. and there are 67 boiler tubes of 2 in. outside dia. and 26 superheater flue tubes of 5½ in. outside dia. The smokebox tubeplate is attached to the boiler barrel by means of a solid rolled angle ring.

The inner steel firebox, of all-welded construction, incorporates a thermic syphon and two arch tubes and is stayed to the roof of the round top outer firebox by direct steel stays with four rows of flexible stays at the front. Flexible waterspace stays are also fitted at the combustion chamber and sides and back of the firebox in the breaking zones.

A 26-element Melesco superheater is fitted and the header is provided with an anti-vacuum valve. The Joco regulator, situated in the dome, is operated by a ramshorn type handle fitted in the cab. Asbestos mattresses are applied to the firebox back and sides for a distance of 1 ft. beyond the back. The boiler and fire box shell is fitted with crinoline hoops and bars on which mild steel sheets are secured by stainless-steel bands.

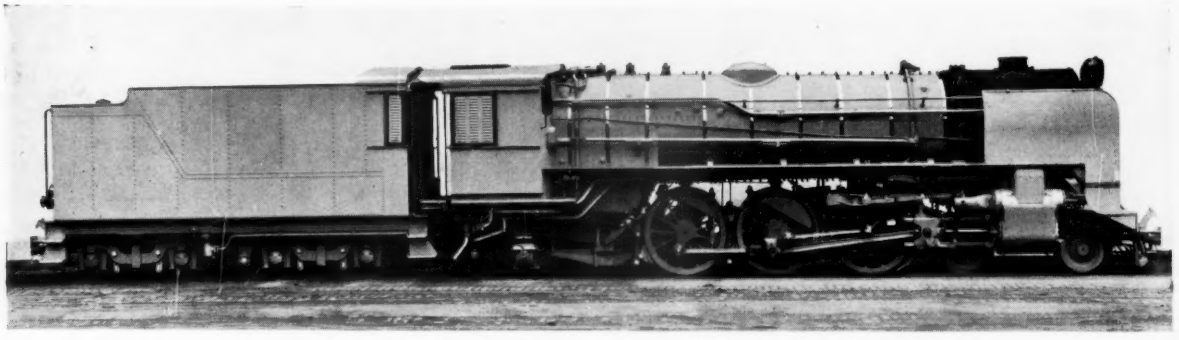
General steam fittings include two I.R.S. pattern injectors, three 2½ in. Ross pop safety valves, two sets of water gauges with protectors, and two Evrit blow-off cocks.

The main frames, finished to a thickness of 3½ in., are cut from rolled-steel slabs and stayed by cast-steel cross stretchers. The hind end of the frame consists of a one-piece cradle steel casting securely attached to the rear of the bar frames by turned and fitted bolts. Coupled axleboxes are of bronze equipped with Ajax keeps and grease lubricators.

Laminated bearing springs are fitted throughout and are of the overhung type with compensation arranged between leading coupled and trailing truck wheels. To keep the weight of the locomotive within the stipulated maximum the engine platforms and cab are built up of aluminium plates and sections. The automatic couplers at front of engine and rear of tender are of A.B.C. Coupler & Engineering PH. type.

Cast-iron cylinders are fitted and provided with renewable liners in the barrels. Cylinder and steam chest hind covers are steel castings and the front covers are of cast iron. Walschaerts valve gear actuates 9 in. dia. piston valves which have a travel of 7 in.

(*Continued on page* 553)



Metre-gauge "YP" class passenger engine for Indian Government Railways

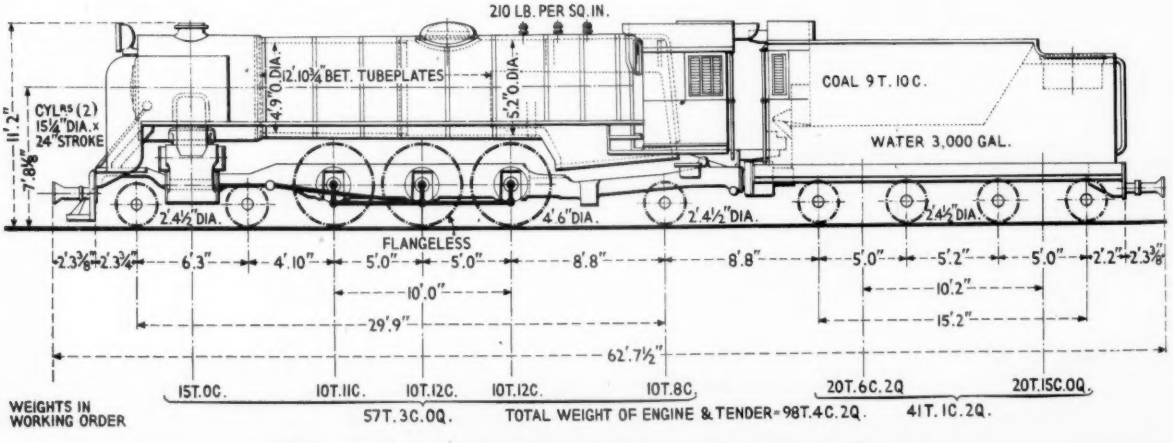


Diagram of principal weights and dimensions of the locomotive

RAILWAY NEWS SECTION

PERSONAL

Mr. A. Johnston, Way & Works Engineer, East African Railways & Harbours, has been appointed Assistant Chief Engineer (Technical).

Mr. R. T. Cortejarena, who, as recorded in our August 22 issue, has been appointed Chief of the Supply Department, General Urquiza Railway, Argentina, received his technical training at the Faculty of Law of the University of Buenos Aires; in the Faculty of Physical & Mathematical Sciences of the University of Eva Perón (La Plata); and the Chilean Polytechnical School. He has previously held the following appointments in the Municipality of Buenos Aires: Secretary and Chief of the Technical Department of the Public Services Division; Secretary General of that Division; General Secretary of the Public Works Division; Member of the Intervention of that Division; Member of the Sports Division & Head of Public Swimming Pools; and Sub-Director of Social Culture. In the Argentine Ministry of Transport he has held positions as Adviser in the Electrical Department of the General Mitre Railway; Adviser in the Technical Under-Secretariat; and Assistant in the General Supervisor's Office of the General Urquiza Railway. In addition to his present post, he is simultaneously General Director of Penal Establishments of the Province of Buenos Aires.

Mr. R. T. Cortejarena

Appointed Chief of the Supply Department, General Urquiza Railway, Argentina

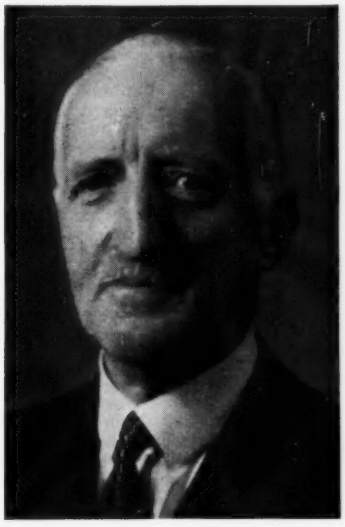
We regret to record the death on November 7, in his 91st year, of Mr. George Terrell, formerly Chairman & Managing Director, Tyer & Co. Ltd.

The general purposes committee of the London County Council has recommended to the Council the appointment of Dr. J. L. Martin, as successor to Mr. Robert Matthew, Architect to the Council. Dr. Martin has held the post of Deputy Architect since 1948, and before he joined the L.C.C. was Deputy Architect, L.M.S.R.

We regret to record the death on November 9, at the age of 90, of the Earl of Powis, a Director of the Cambrian Railways between 1901-22.

The Eastern Region of British Railways announces the appointment of Mr. J. E. H. Skerrett, Assistant District Operating Superintendent, Hull, as Assistant District Operating Superintendent, Doncaster.

Mr. H. R. F. Kingscote, Industrial Commissioner, Canadian Pacific Railway, London, who, as recorded in our November 7 issue, has retired, has taken an important part in the development of trade between Great Britain and Canada. He joined the London Freight Department of the Canadian Pacific in 1910 and shortly afterwards became Cashier for the company in Vienna. Later he was appointed Co-Director in Hamburg and in 1924 became engaged solely in industrial work. Mr. Kingscote was appointed as Industrial Agent in 1931 and Industrial Commissioner in 1946.



Mr. H. R. F. Kingscote

Industrial Commissioner, C.P.R., London, 1946-52

We regret to record the death, at the age of 72, of Captain J. W. Harris, R.N.R., Chief Marine Superintendent, L.M.S.R., 1931-37, and Marine Manager, L.M.S.R., 1937-43. From 1895-1900 he was at sea in sailing ships and in November, 1900, joined the Booth Line as Third Mate. He passed for extra master in 1904 (sail), and was appointed Chief Officer. In July, 1909, he passed the voluntary examination in steam, and in November of that year was promoted Master, and commanded several of the company's steamers, including *Ambrose*, *Antony*, and *Hilary*. During the winter of 1914 Captain Harris served as Lt.-Commander, R.N.R., in the fleet sweepers. At the request of the Booth Line, he was demobilised and in June, 1916, was sent to New York as Marine Superintendent for the Booth Line and Alfred Holt & Company. In August, 1918, he was recalled and appointed Marine Superintendent of the Booth Line, with which company he remained until 1931. In August, 1931, he became Chief Marine Superintendent, L.M.S.R., Euston, and in 1937, Marine Manager. He was a prominent member of the Honourable Company of Master Mariners, of which he had been Prime Warden and Deputy Master. He was a Younger Brother of Trinity House; and representative of the Honourable Company of Master Mariners on the Technical Committee of Lloyd's Register of Shipping.

Mr. C. A. L. Mansbridge, who, as recorded in our November 7 issue, has been appointed Industrial Commissioner for the Canadian Pacific Railway in London, was previously Industrial Agent. He joined the C.P.R. in 1929, in the Office of the European Passenger Manager. From 1941-45 he was on loan to the Ministry of Supply, first as Personal Assistant to the Controller of Transport (Shipping). In 1945 he was appointed Transport Officer for the Ministry, in Paris, and moved to Southampton the following year as Port Officer. Mr. Mansbridge rejoined the C.P.R. in 1946, and returned to the Passenger Department for a short time before his transfer to the Industrial Department. He was appointed Industrial Agent three years ago.

Mr. C. A. L. Mansbridge

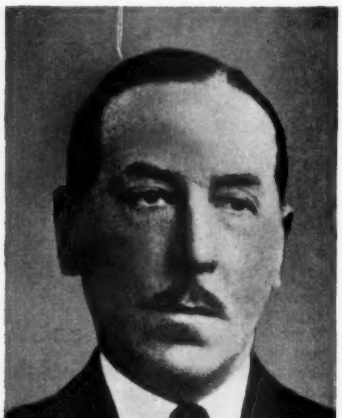
Appointed Industrial Commissioner, C.P.R., London.

Mr. H. Alton and Mr. W. Moore have been appointed Directors of Redpath Brown & Co. Ltd. Mr. Alton, who has been Chief Accountant of the company since 1945, was formerly with the parent company of Dorman, Long & Co. Ltd. Mr. Moore was last year appointed Manager, Redpath Brown Glasgow Works.

Major W. Berry, Chairman & Managing Director of Henry Berry & Co. Ltd., has relinquished his position as Managing Director, but has retained the Chairmanship of the company; he had been Managing Director for 30 years. Mr. P. G. Corin, Technical Director, and Mr. A. Walker, Director & General Manager, become Joint Managing Directors.

Mr. Alfred Jones

Appointed Chief Assistant to Commercial Superintendent (Passenger), London Midland Region



The late Mr. Irvine Kempt

Divisional Carriage & Wagon Superintendent, Glasgow, L.M.S.R., 1923-31

Mr. D. A. F. Quekett

Appointed Assistant District Goods Superintendent, Sheffield, Eastern Region, British Railways

Mr. Alfred Jones, Assistant to Commercial Superintendent (Passenger), London Midland Region, who, as recorded in our October 17 issue, has been appointed Chief Assistant to Commercial Superintendent (Passenger), began his railway career with the Lancashire & Yorkshire Railway at Manchester in 1911. After five years in the District Passenger Superintendent's Office he joined the Office of Superintendent of the Line and was engaged principally on work associated with control organisation and freight train operating. He was successively in the General Superintendent's Office and Divisional Superintendent's Office at Manchester. In May, 1931, he took charge of the Shunting Analysis Committee for the Central Division of the L.M.S.R. and in December, 1931, was promoted Assistant District Controller, Wakefield. Three years later Mr. Jones was transferred to the Chief Commercial Manager's Office, Euston, where he was on special duties principally related to the London Passenger Transport Pooling Scheme. In 1936 he was appointed Deputy Chief Passenger Rates & Fares Clerk and two years later was made Chief Passenger Rates & Fares Clerk; in 1944 he became Assistant (Passenger Rates & Fares). In 1946 he was promoted Assistant to Chief Commercial Manager (Passenger) and in 1949 Assistant to Commercial Superintendent (Passenger), London Midland Region. During recent years Mr. Jones has been closely associated with the passenger charges schemes submitted to the Transport Tribunal in 1950 and 1951.

Mr. H. S. Driver, who was recently appointed by Norris, Henty & Gardners Limited, as its Factory Representative in Australasia, has now sailed for Sydney to assume his duties there.

Mr. H. L. Weinberg has been appointed Director of Engineering, American Locomotive Company, and will be in charge of all product development and engineering in the company's Locomotive Division, with headquarters at Schenectady, New York. Mr. Weinberg has been succeeded as Chief Engineer by Mr. K. B. Rowell.

Mr. Irvine Kempt, whose death we recorded briefly in our November 7 issue, was Divisional Carriage & Wagon Superintendent, Glasgow, L.M.S.R., 1923-31. He was educated at Albany Academy and Kelvinside Academy, Glasgow, and afterwards at Glasgow University and Glasgow Technical College. He began his apprenticeship in the Caledonian Railway St. Rollox Works in 1888, under Mr. Dugald Drummond, and passed through all departments. After a short period as draughtsman at St. Rollox, he was transferred to Polmadie Running Shed, Glasgow, as Assistant Foreman. He later returned to St. Rollox as an Inspector in the Carriage & Wagon Department and became Foreman in a number of shops. In 1899 he was appointed Assistant Manager in the Carriage & Wagon Department and in 1908 was transferred to the position of Chief Locomotive Inspector or Running Manager. He was appointed Assistant Locomotive Superintendent, Works, in 1914 and in 1923 he became Divisional Carriage & Wagon Superintendent, Glasgow, L.M.S.R. Mr. Kempt retired in 1931.

Mr. R. H. Robertson, C.M.G., General Manager, Sudan Railways, 1946-50, whose death we recorded briefly last week, was born in India and received his education in that country and in England. After serving in the Indian Army during the first world war, he returned to England and took his degree as B.Sc(Eng.) with honours, at the University of London. Following a short pupilage with the Midland & Great Northern Joint Railways, during which he gained experience in civil engineering, he joined the Sudan Railways in 1924. During 1925-26 he was Assistant to Resident Engineer, Port Sudan Extension, and he was appointed Harbour Engineer in 1927. Mr. Robertson became Maintenance Engineer in 1934; Assistant Chief Engineer, 1939; Chief Engineer, 1940; Deputy General Manager, 1941; and General Manager in 1946. He was a member of the Governor-General's Council from 1946, until the Council was dissolved on establishment of the Executive Council and the Legislative Assembly. Mr. Robertson retired as General Manager in 1950.

Mr. D. A. F. Quekett, A.M.Inst.T., Assistant to District Goods Superintendent, London City, Eastern Region, who, as recorded in our October 10 issue, has been appointed Assistant District Goods Superintendent, Sheffield, Eastern Region, entered the service of the L.M.S.R. (Northern Counties Committee) at Carrickfergus in 1934. He was given special training in the Commercial and Operating Departments and came to England in 1937, where he was successively in the Crewe, Manchester and Sheffield districts, L.M.S.R. After serving as runner to the District Managers at Leeds and Barrow-in-Furness, he joined the Royal Engineers (Transportation Branch) early in 1940. He was employed on military railways throughout the war, reached the rank of Lt.-Colonel and served overseas with allied forces transportation staff and units in Algeria, Italy and Trieste. After demobilisation in 1946, he held Goods Agencies in the London and Wolverhampton districts, before being appointed Assistant to District Goods Superintendent, London City, Eastern Region, in 1950. Mr. Quekett is an Associate Member of the Institute of Transport and a Freeman of the City of London and of the Worshipful Company of Merchant Taylors. At present he holds the rank of Major in the Royal Engineers' (Army Emergency Reserve) and commands the 152nd Railway Traffic Squadron, R.E. (A.E.R.), a unit originally sponsored by the L.M.S.R. and G.W.R. and still composed mainly of employees of British Railways.

Mr. H. G. Valentine, Assistant Traffic Manager of Thos. Cook & Son Ltd. has been appointed Traffic Manager, International Sleeping Car Company.

The Directors of the Incandescent Heat Co. Ltd., the parent company of the Incandescent Group of thermal engineering companies, whose main works is at Smethwick, announce the appointment of Mr. Thomas Geoffrey Fallon as Managing Director, and Mr. Cecil George Pettit, M.I.P.E., as Assistant Managing Director. The Chairmanship of the parent company and the Group is held by Mr. J. Fallon, J.P., M.I.Mech.E.

"YP" Locomotives for India

(*Concluded from page 550*)

Skefko roller bearings are fitted to the crank ends of the eccentric rods and reversing gear is of the hand screw type.

The engine front bogie and hind truck are equipped with British Timken roller-bearing axleboxes, those for the bogie being of the split cannon type. Vacuum brake equipment is provided for engine and tender and actuates brake blocks on all coupled and tender wheels. Fittings include a Gresham & Craven SJ type "P" ejector, two "F" class cylinders, one 15 in. and one 21 in. on the engine and two 15 in. cylinders on the tender.

Gravity dry sanding equipment is fitted and sand is delivered in front of the leading coupled wheels. Stone's electric lighting equipment is installed and includes a turbo-generator type T.G.1, a Tonum E headlight and all necessary cab and gauge lights. A British Thomson-Houston speed indicator is also fitted.

The tender is of the double four-wheel bogie type and carries 3,000 gallons of water and 9½ tons of coal. The tank and bunker are of welded construction throughout. The tender underframe is built up of longitudinal channels and cross sections welded together, with cast-steel dragboxes at front and rear.

The tender bogie side frames consist of flanged plates welded together to form a box section.

This design was originally evolved for the tender bogie frames of the Indian Government Railways "WG" class locomotives, which were built by the Company, particulars of which were given in our January 19, 1951, issue, and obviates the need of large steel castings. Skefko roller bearing axleboxes are fitted on the tender bogies. The following are the main particulars:—

Cylinders, dia. and stroke ...	15¼ in. × 24 in.
Coupled wheels, dia.	4 ft. 6 in.
Engine bogie wheels, dia. ...	2 ft. 4½ in.
Engine truck wheels, dia. ...	2 ft. 4½ in.
Engine coupled wheelbase ...	10 ft.
Engine total wheelbase ...	29 ft. 9 in.
Heating surface :—	
Large tubes	459 sq. ft.
Small tubes	456 sq. ft.
Firebox, including syphon and arch tubes	196 sq. ft.
Total	1,111 sq. ft.
Superheater	331 sq. ft.
Total	1,442 sq. ft.
Grate area	28 sq. ft.
Working pressure	210 lb. per sq. in.
Tank capacity	3,000 gal.
Coal capacity	9·5 tons
Tender bogie wheels, dia. ...	2 ft. 4½ in.
Total wheelbase, engine and tender	53 ft. 7 in.
Weight in working order :—	
Engine	57 tons, 3 cwt.
Tender	41 tons 1 cwt. 2 qr.
Total, engine and tender ...	98 tons 4 cwt. 2 qr.
Tractive effort at 85 per cent working pressure	18,450 lb.

WORKMEN'S TRAINS IN COLLISION AT ROTTERDAM. — Two workmen's trains collided near Rotterdam on November 7 and at least forty persons were hurt. The accident occurred on a line running to the Pernis oil refineries near Rotterdam and used only for carrying workmen to and from the refineries. There are no signals on the line but there is a speed limit of about 6 m.p.h.

Netherlands Railways Signal Aspects

Paper by Mr. J. H. Verstegen on principles followed in selecting new indications

At the meeting of the Institution of Railway Signal Engineers held in London on October 16, the President, Mr. T. S. Lascelles, who was in the chair, expressed the sympathy of the Institution with the sufferers in the Harrow accident and with all railway officers concerned in the anxious time they had experienced. The accident was the second worst ever to occur on the railways of the United Kingdom, being exceeded only by the troop train collision at Gretna in 1915. In both cases, an express on the adjoining line ran into the wreckage. As signal engineers they felt the seriousness of these accidents very keenly, for all their work was devoted to preventing them.

Introducing the speaker, the President said that some of them had made Mr. J. H. Verstegen's acquaintance when the Institution visited the Netherlands in 1929, and they had remained in very friendly relations ever since. Mr. Verstegen had been in close contact, of recent years, with English signal engineers in connection with the work of the sub-committees of the International Union of Railways. He had had 40 years' experience in signalling in Holland and, in 1946, succeeded the late Mr. Van Aalderen as Chief Signal Engineer, retiring from that post this year. The war created very great difficulties for him and at its end an enormous amount of work had to be done to rehabilitate the equipment. Having been associated with the introduction of automatic signalling in 1912, and later colour-light signalling, Mr. Verstegen had taken the opportunity to work out a new system of signal aspects suited to present-day conditions on electrified lines.

Distinctive Colour-Light Aspects

Mr. J. H. Verstegen, before reading his paper on "Modern Signal Aspects on the Netherlands Railways," expressed the sympathy of the railway staff in the Netherlands with their British colleagues over the Harrow accident. The paper described how the new aspects came to be considered and the decision taken to cease using light signals as a mere translation of the existing semaphores, confining them entirely to the new system and so making a clear distinction between old and new; and also to arrange the new indications so as to avoid any confusion in drivers' minds. The principles of the new aspects were fully set out with examples of their application to a typical station layout, and certain special aspects, such as the fourth or calling-on aspect, were explained, with the means taken to prevent misleading indications appearing in the event of lamp or searchlight mechanism failures.

The signalling of unequal and equal speed junctions was described. Mr. Verstegen concluded by showing a number of lantern slides, covering the details treated in the paper and illustrating other apparatus of special interest, such as mechanical and electrical trailable point operating mechanisms, and level crossing flashing light warning signals, with photographs of damaged signalboxes, signals, and other equipment, and some modern power interlocking installations.

Mr. E. G. Brentnall, in opening the discussion, congratulated Mr. Verstegen on his excellent paper and on the courage he had shown in carrying out the task that awaited him after the liberation of the Netherlands. Referring to the signal aspects, he thought that the showing of one colour at a time was a great advantage, as it saved ambiguity. He wondered whether, in Holland, any difficulty was experienced, as happens in this country, through confusion between railway signals and lights provided for road services in close proximity to the track, it being sometimes necessary to have lamps moved or to shade them. He sought information as to the type of signal used for a main line where high speeds were permitted and where, at some point, a speed restriction was necessary due to bridges or curves. It was interesting to note the extensive use of relay interlocking in Holland and he wondered whether they had found that such installations presented any particular difficulty in the case of track circuit failures.

Mr. J. F. H. Tyler discussed the question of the differences between the signalling in stations and at their approach and along the open line, and the problem of how, in the case of short signal spacing, the various aspects would in practice be applied. He also commented on the adoption of automatic warning lights at crossings and the elimination of barriers, and asked whether this was done inside town areas and whether there had been an increase in the number of accidents in consequence.

Mr. B. F. Wagenrieder asked what protection was provided in the event of a road vehicle stalling on an automatically signalled level crossing.

After Mr. Verstegen had replied to the questions, he intimated that he would be very happy to answer any written questions that members might care to send him.

The President, in moving a hearty vote of thanks to Mr. Verstegen for the trouble he had taken in coming from Utrecht to read such an interesting paper, said that all would admire not only his courage in the dark hours of the war, but in taking advantage of the opportunity afforded by the circumstances to introduce such an important step forward in signalling on the Dutch lines.

MODERNISATION OF DUMFRIES GOODS DEPOT.—The Scottish Region is introducing a scheme of modernisation in the goods depot at Dumfries in order to speed the handling of traffic. Structural alterations to the goods shed and its internal layout; the provision of electric elevating platform trucks and stillages for the handling of traffic; re-positioning of shed cranes; and alterations to the sidings are among the features of the scheme of modernisation about to take place at this busy goods station, which is an important transhipment centre for the South of Scotland. Once the project has been brought into operation, received sundry traffic will be discharged from the wagons on to stillages for conveyance by electric elevating platform trucks to the cartage delivery vehicles, or to the forwarded wagons in the case of traffic for further transit by rail. An electric capstan will feed the loaded wagons into the shed, and withdraw the empty wagons. Incoming lorries with traffic for despatch will be loaded direct to wagons set up in the shed. The scheme will involve the provision of a fireproof electric truck garage and switch house for the servicing of the electric trucks.

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Press Comment on the Transport Bill

Changes viewed generally as possible improvements that must await the test of practical application

Reactions in the daily and weekly press to the Transport Bill as now revised inclined generally to the view that something had been gained from the period of discussion and reflection since the first version appeared, but that there are still proposals that must be viewed with caution. In the opinion of *The Times*, "The most important feature of the new Bill is that it will give the railways a remarkable degree of freedom in fixing their charges when competing with other transport. The Bill also removes the worst features of the levy, but it introduces no improvement in the manner of disposing of nationalised road transport. The changes proposed in regard to railway charges appear to make the Bill a landmark in railway history. . . . The best carvers, it has been remarked, pay some attention to the bone structure when they dismember a chicken. Thus when the Transport Bill comes up for its second reading it will be much better than at first, largely because it has been amended in the light of discussions with those engaged in transport as suppliers or users. There are still parts of the Bill which need drastic amendment. But Parliament should now be able to produce a satisfactory measure if Government and Opposition will keep constantly before them the hazard to the national economy of yet another convulsion in transport within a few years' time."

In its leading article of November 6 on the Bill, *The Manchester Guardian* said the new measure lacked some of the unrealistic provisions of its predecessor, but thought it open to question whether it would do much to improve the country's transport system. Regarding the proposals for reorganisation of railway management, the article suggested a difficulty ahead in the following words: "The 1948 Act intended to place the management of the railways firmly in the hands of the Railway Executive and to leave the higher direction of policy to the Transport Commission. If the proposed new system, which has still to be worked out, should not succeed in creating real management units it may easily place on the shoulders of the Commission management functions for which it is not fitted."

It summed up with the comment that "The new Bill is clearly better than the old one but it is still not very convincing."

"Wildly Unpractical Idea"

The next day, November 7, *The Manchester Guardian* had considered matters further and criticised the whole measure under the heading "A Bad Bill." Here the reorganisation proposals were described as "astonishing," and among the criticisms was the following: "The only body that could insist on national standards in such matters as standardisation of design, treatment of staff, and so on will be a Transport Commission which is to consist almost entirely of part-time members. This would be excellent if the duties of the commission were in fact similar to those of a board of directors in a business enterprise. But as the Bill leaves the commission also with the responsibility for co-ordinating the area managements and insisting on efficiency throughout the system the whole idea seems wildly unpractical."

The tenor of the leader in *The Daily Telegraph* of November 6 was that all the changes in the revised Bill were decided improvements. The new freedom for the railways in quoting charges was greeted as "an immense, almost a revolutionary advance towards a solution of the perennial transport problem, on which the Minister is to be congratulated." On the other hand, retention of the provision for competitors to seek redress from the Tribunal against alleged undercutting was regarded as unnecessary, on the grounds that neither side would require artificial protection against the other.

The charging powers of the Commission were also questioned: "Overall administration, including the power of making charges schemes, is to remain with the Transport Commission. It is open to question whether it would not have been better to place the several railway areas under a central management responsible to the Commission as a supervisory, not an administrative body—a system which worked well with the old railway companies."

The Financial Times noted the three main changes of the Bill but found it impossible to judge them at this stage. Its attitude was summed up as follows: "It is not known how much of the Commission's road haulage business will be sold, nor for how much. Consequently it is not possible to say how serious a problem the levy will be. The new freedom granted to the railways in one part of the Bill appears to have been partially removed in another. Where the railways can be shown to have a monopoly, the old restrictions remain. In any event the new freedoms will not apply till a new charges scheme is framed; since in the new circumstances a wholly new set of principles will have to be worked out this may take months, even years. Finally, though the date for the removal of the 25-mile limit will dispel some of the uncertainty that has for so long overhung the whole transport system, there is so much in the Bill that depends on the Minister's interpretation of it that, until the debate in Parliament has advanced to the Committee stage, it is difficult to know exactly what will be done."

Comment in *The Scotsman* dwelt mainly on the benefits to be expected from improved competitive conditions between rail and road. The Government's decision to see that the levy is paid off as soon as possible was held to indicate resolve to hold the balance fairly and fashion a Bill that will not be undone.

"A Signal Defect"

Under the heading "Third Try for Transport," *The Economist* said the really new feature of the Bill was the attempt to pay some attention to the economic problems of the railways. This paper, too, had misgivings over possibilities of delay in realising the proposals. It commented: "Five years have passed since the Labour Government's Transport Act contemplated a two-year period for the formulation of charges schemes; there is still no charges scheme for freight traffic. It is difficult to see how any more or less rational scheme can be devised until the disturbance arising from the severing of road haulage from the Commission is over. Are the railways, then, to wait, conceivably for several years, before they are allowed to take this relatively modest first step towards commercial freedom?"

In conclusion, *The Economist* wrote: "If therefore there is logic in a new experiment towards greater freedom for the different forms of transport, let it be freedom that is conferred equally upon the railways . . . it is a signal defect of the Government's new Bill that it leaves out of consideration the terms on which road and rail can best serve the country in competitive and efficient rivalry."

Harrow Inquiry Concluded

Lt.-Colonel G. R. S. Wilson, Chief Inspecting Officer of Railways, Ministry of Transport, on November 6, closed his inquiry into the accident at Harrow & Wealdstone Station on October 8. The previous hearings on October 15 and 16 were reported in our issue of October 24.

Driver W. H. Darton, driver of the train engine of the down Manchester train which ran into the wreckage of the up Perth express and the Tring local, said he had seen green lights all the way to Wembley and then saw the green distant for Harrow. He had seen no signals go back to danger. It was impossible to see any train in Harrow Station and he could only suppose that the driver of the leading engine had braked at the moment of impact.

Fireman G. Cowper of the pilot engine on the Manchester express said he had been looking out but was sitting down at the time of the accident. He remembered no more until he recovered consciousness. They were not travelling at full speed, but were working up to it.

Guard A. Smith of the Manchester train estimated the speed as 50 m.p.h. He had been in the rear van of the Manchester portion and was satisfied in his own mind that they had a clear road.

After hearing evidence on the condition of the locomotive of the Perth train, which had undergone a full examination on September 21, Colonel Wilson asked to be informed of any broken or burst pipes found when it was repaired at Crewe.

Evidence was given that Driver Jones of the Perth train had appeared in normal health on the day of the accident. He had never spoken of having difficulty with seeing signals, and there had been no complaints as to his reliability.

Other witnesses gave estimates of the speed at which the Perth train had passed them before the accident. A lengthman at Bushey put the speed at 60 m.p.h. and thought the express was 4 min. behind the Tring local. A signalman at Watford No. 2 box described how the train had been checked north of Watford and went past him at 40 to 50 m.p.h. The Bushey signalman remembered the Glasgow train passing him at about 50 m.p.h. and was quite sure that the Perth train had been going much faster—about 60 m.p.h.

Signalman D. Pullen, North Wembley box, said he had accepted the Glasgow and Tring trains but not the Perth train.

Colonel Wilson then concluded his inquiry, and said that his report would be published in due course.

Gloucester Railway Carriage & Wagon Co. Ltd.

The annual general meeting of the Gloucester Carriage & Wagon Co. Ltd. was held at the registered office of the company in Gloucester on October 31; in the unavoidable absence of the Chairman, Sir Leslie Boyce, Mr. John H. Beach, the Deputy Chairman, presided.

The Chairman's statement, circulated with the report and accounts for the year ended May 31, 1952, explained that the trading profit of the group was £324,755, against £361,866 for the previous year and £333,329 for the year 1949-50. After adding other profits and deducting depreciation and other debits, exclusive of taxation, the group profit was £292,244 for the year. Taxation on these profits amounted to £164,381, leaving a net profit of £127,863, compared with £154,356 a year ago. The net profit attributable to the parent company was £122,167 (£141,372).

The subsidiaries retained £19,134 in their books as reserves and as balances in the profit and loss accounts, and the net profit brought to the parent company's account was £103,033 (£105,947). This figure was increased to £127,608 by adding the amount brought forward from last year.

After payment of the interim dividend of £20,672, the statement explains, there remained a disposable balance of £106,936, which the directors recommended should be appropriated by payment of a final dividend of 4½d. per 10s. unit, less tax, which would absorb £20,672, by transferring to general reserve £50,000, and by carrying forward £36,264 (£24,575). The total reserves in the group attributable to the parent company would then amount to £741,035.

Burden of Taxation

Sir Leslie Boyce pointed out in his statement that out of each £100 of profit, £56 5s. went to the Treasury in taxation, £27 13s. was allocated to very necessary reserves and profit and loss accounts, £1 19s. was attributable to outside shareholders in one of the subsidiary companies, and if the board's recommendations were accepted, £14 3s. (including the interim dividend already paid) would go to stockholders.

The capital owned by the stockholders amounted on a conservative valuation to £1,791,000, and the gross return to stockholders was 4⅜ per cent. As dividends were the wages of capital upon which very many people past work had to live, this return was very modest.

During the year under review, the statement continued, it had been increasingly difficult to obtain materials, particularly steel, and the firm's capacity had not been taken up nor had the position greatly improved since the close of the year. Yet, despite this and other hindrances from which so many national industries were suffering, the company, with its subsidiaries, had once more enjoyed a year of modest prosperity.

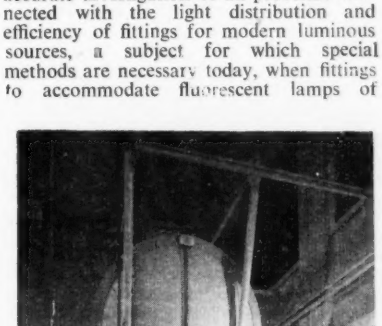
Order Book Satisfactory

The order book continued very satisfactory and during the past year, many important contracts had been secured in the face of keenest competition from both home and abroad. One of these orders, for 104 rapid transit cars for the Toronto Transportation Commission, was widely reported in the Press as a good dollar earner. Continuous work for the vast majority of their employees was ensured for some time, provided that supplies of material improved.

The report and accounts were unanimously adopted, and the dividend as recommended was approved.

Lighting Research Laboratory

A new engineering and research laboratory devoted to the development of lighting fittings and lighting technique for industry was opened at the Brantwood Road, Tottenham, premises of Benjamin Electric Limited on November 6. Numerous special pieces of apparatus have been installed, many of them designed and manufactured by the company's own staff. The equipment of the laboratory facilitates the accurate investigation of all problems connected with the light distribution and efficiency of fittings for modern luminous sources, a subject for which special methods are necessary today, when fittings to accommodate fluorescent lamps of



Measuring the efficiency of a lighting fitting at the new Benjamin research laboratory

lengths up to 8 ft. have to be manipulated.

One piece of equipment representative of the original approach to the various problems is a polar co-ordinate photometer with a rotatable photo-electric recording head, which enables measurements to be taken with the lamp burning in the normal position. The head is controlled and the readings are taken in normal daylight in the adjoining room. A 12 ft. dia. integrating photometric sphere is provided for measuring and comparing the light output ratio of fittings. Special rooms are equipped for temperature, humidity, and water tests, which are of particular importance for fittings being sent overseas.

The laboratory is engaged both on tests of new designs and routine checks of current production to ensure that the desired standards are maintained. Movable gantries are provided for suspension of fittings from the ceiling, and the floor is marked out in 3 ft. squares to facilitate measurements. Wiring ducts in the floor enable power supplies to be brought conveniently to equipment. Stabilised a.c. and d.c. supplies are available.

Mr. A. E. Iliffe, Sales Director of Benjamin Electric Limited, said at a luncheon to the technical press at Whitehall Court on the opening day, that lighting was the best way of utilising electricity for the common weal. Nine-tenths of human activity was dependent on vision.

Mr. Hugh Pocock, Managing Editor of the *Electrical Review*, replying for the press, said it was impossible to avoid capital expenditure on research departments for industry. He congratulated Benjamin Electric Limited on having provided for their needs in this respect for many years to come.

Mr. S. G. Rattee, Editor, *The Electrician*, in proposing the toast of Benjamin Electric Limited, said that one of the easiest ways of raising productivity was to improve lighting.

Mr. H. G. Campbell, Co-Director, Benjamin Electric Limited, replying to the toast, said that most of the equipment they had seen had been designed at Tottenham and manufactured in the company's works.

Swiss Federal Railways Budget for 1953

The budget of the Swiss Federal Railways for 1953 provides for expediture of fr.816,600,000, less than 3 per cent more than the expenditure foreseen for 1952. Receipts for 1953 are expected to amount to fr.816·6 million.

Over 45 per cent of expenditure has been earmarked for wages and salaries and various staff items, but no allowance has been made for possible additional cost-of-living allocations as were granted in 1951 and 1952. Other items of expenditure budgeted for 1953 are: for materials, fr.228,200,000 (fr.299,600,000 for 1952); for depreciation, fr.123,300,000 (fr.107,200,000); capital expenditure fr.49,200,000 (fr.48,900,000); and miscellaneous expenditure, fr.44,500,000 (fr.45,100,000).

In estimating receipts, allowance has been made for probable continuance of the present economic recession in Switzerland. Despite this, higher working receipts are envisaged than budgeted for 1952, because of increases in rates and fares operative as from January 1 and April 1, 1952, respectively. In view of the continued expansion of passenger receipts in 1952, those for 1953 are estimated at a higher figure.

Building and Works Programme

Fr.136 million has been budgeted for the renewal, reconstruction, and additions to plant, equipment, and locomotives and rolling stock. This includes fr.20·8 million for 63 items, the most important of which is the goods station of Lausanne-Sébeillon, and reconstruction of the Austro-Swiss frontier station at Buchs.

Electrification is provided for the twelve-mile Monthey—St. Gingolph extension of the electrified St. Maurice—Monthey line, also of the old Hauenstein line between Basle and Olten (though most traffic is routed by the new line through the Hauenstein Tunnel).

Additions to rolling stock envisaged for 1953 include 13 electric railcars, two twin-unit electric railcar sets for excursion traffic, 14 driving trailers, 200 passenger coaches, six restaurant cars, and 200 goods wagons.

BRITISH WOOD PRESERVING ASSOCIATION.—The 1953 Convention of the British Wood Preserving Association will be held at Trinity College, Cambridge, between June 24-26. Delegates will assemble for lunch on June 24, and the official reception and dinner will be held in the hall of Trinity College on the evening of June 25.

Reconstruction of Balloch Pier

New facilities for B.R.
Loch Lomond steamers

Balloch Pier is the gateway through which pass every year thousands of tourists and visitors on the way to Loch Lomond, the Trossachs, and other places of scenic attraction in the West of Scotland. It is situated at the extreme south end of Loch Lomond and is the base for British Railways pleasure steamers which operate on the loch during the summer months.

Last winter Balloch Pier, which is the terminius of the branch railway along the Vale of Leven and is served by trains from Glasgow and elsewhere, *via* Dumbarton, was completely demolished and the original structure of framed timber replaced by a new pier of steel sheet piling, retaining hard-core filling faced with red sandstone pitching.

The old pier, about 245 ft. long by 62 ft. in width, was an orthodox timber pier. The depth of water available for the steamers—the loch is not tidal—under normal conditions varies from about 4 ft. 6 in. at the landward end to 12 ft. or more at the forward end. The pier was built more than sixty years ago and was itself a replacement of an even older structure. Part of the passenger station platform and running lines, and also two additional railway sidings were located on the pier.

The condition of the pier was such that an entire replacement was necessary, and because of timber scarcity consideration was given to other methods of construction. As that part of the passenger platform formerly on the pier and two of the sidings could be dispensed with, the design adopted and constructed consists of a hard-core filled embankment extending for the full length, and in the same line as, the former pier.

On the berthing side, the filling is retained by Larsen steel sheet piling driven into the bed of the loch and having a finished height approximately at top water level. It is secured by steel ties into a continuous concrete anchor block running the full length of, and buried about 40 ft. back in the hard core filling.

The steamer berthing point is situated 70 ft. back from the tip of the new pier and consists of a timber structure 45 ft. in length by 28 ft. broad, having a timber deck set at platform level to which access is gained from the end of the railway passenger platform by a ramped approach road 15 ft. wide having substantial timber handrails on each side.

Beneath this timber structure is built a concrete coal storage bunker from which the steamers are fuelled and to which access is obtained at deck level by removable timber hatches, the coal being unloaded direct through these from rail wagons alongside. At a later date, if it is decided that the Loch Lomond steamers are to be oil-fired, this same facility can be suitably adapted and utilised for fuelling.

Substantial timber fenders and berthing gangways together with mooring bollards and other facilities are spaced at suitable intervals on each side of the berthing point, and all the stone filling above the level of the piling and for part of the way round the back face of the filling is finished off by red sand-stone pitching set in cement mortar. The remainder of the backface of the filling is protected by heavy stone rip-rap pitching.

Practically all the timber of the former pier was removed and, where suitable, the recoverable material was used in the new structure. The work at Balloch Pier began in October, 1951, as there are no sailings on Loch Lomond during the winter months; and the demolition of the old pier and the work of construction on the new one proceeded without interruption despite very difficult weather conditions. The pier itself was finished and brought into use on Monday, May 26, the date of the opening of the 1952 seasonal sailings on Loch Lomond, and the subsidiary works have since been completed.

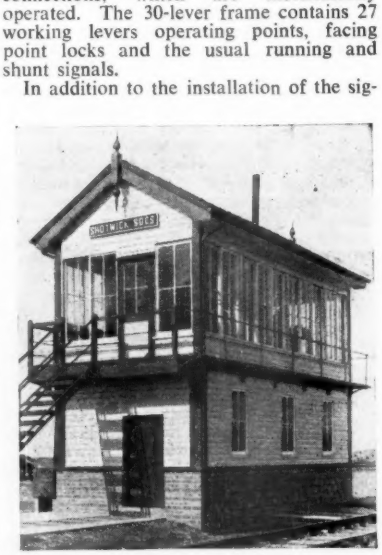
P. Caulfield & Co. Ltd., Bonhill, Dunbartonshire, was the contractor, and the whole of the work was carried out to the designs and under the supervision of the Civil Engineer, Scottish Region. The total cost of the work was in the region of £15,000, a figure very substantially less than the cost of a replacement of the more orthodox original structure. Because of the nature of the new work, maintenance costs should be much lower.

The general effect of the black sheet-piling, sandstone pitching and creosoted timber piling, the whole surmounted by white-painted handrails, gives a very pleasing impression and in no way detracts from the world-famed natural beauties of the locality in which Balloch Pier is situated.

Shotwick Sidings Signalbox

At Shotton, Flint, on the Wrexham-Bidston line, an all-timber signalbox constructed of serviceable redundant material, containing a 30-lever standard London Midland Region pattern frame, has been erected to control facing and trailing points connecting a new set of sidings for John Summers & Sons Ltd. steelworks. The box is named Shotwick Sidings. The connections comprise facing points giving direct access to the sidings from both up and down lines and are situated some 670 yd. apart. The signalbox is centrally placed between the connections, which are mechanically operated. The 30-lever frame contains 27 working levers operating points, facing point locks and the usual running and shunt signals.

In addition to the installation of the signalling equipment and the erection of the 26-ft. signalbox, it was necessary to erect more than 20 new telegraph poles in place of existing poles which were too light to carry the additional line wires required.



New box at Shotwick Sidings, London Midland Region

Although the signalbox and layout are not unusual, the installation is an example of speedy work. Preliminary authority to begin work was given on July 25, and a start was made at the end of July. At 11.42 a.m. on September 18 the new box was brought into use. As the work was fully under way on July 28, the total time taken to completion was only a little over seven weeks.

The scheme was planned and carried out entirely by the staff of Mr. S. Williams, Signal & Telecommunications Engineer, London Midland Region.

Staff & Labour Matters

Joint Consultation

The Railway Executive announces that railwaymen of all grades who have been elected by their colleagues to represent them on Local Departmental Committees or Sectional Councils are to meet management representatives in a series of five-day conferences arranged by British Railways. The first of these started on November 10.

The conferences, of which there will be sixteen, are designed to give those railwaymen who are concerned with aspects of staff relations a greater insight into the practicability and the value of joint consultation. They are being held at the Manor House, Shanklin, Isle of Wight.

After a review of the aims of joint consultation, the conference will divide into nine syndicates to discuss a given subject. The conference will then reassemble and the subject will be discussed in open meeting. This procedure will be repeated for each subject discussed and the session will end with a review of the conference and remarks by the Chief Instructor. Visiting railway and trades union officers will give occasional talks in the evenings.

Each conference will be attended by representatives of Local Department Committees, Sectional Councils, and the management, drawn from all parts of British Railways.

Railway Shopmen

The claim submitted by the employees' side of the Railway Shopmen's Council for improved rates of pay was discussed at a meeting of the Railway Shopmen's National Council on November 5. It was agreed to defer further consideration of the claim until another meeting.

Since the claim was first lodged with the Railway Executive, the Railway Staff National Tribunal has issued its award under which railway salaried and conciliation staff have received pay increases of 7s. a week as from November 2, which is in line with the increase of 7s. 4d. a week agreed for the outside engineering industry.

Engineers' Wage Claim

The C.S.E.U. executive council decided on November 7 to accept the offer of the engineering employers to increase the rates of pay of engineering workers by 7s. 4d. a week. A similar offer by the shipbuilding employers to increase the rates of pay of shipyard workers by 7s. 6d. a week was also accepted. The increases will affect some 2,500,000 employees and the cost is stated to be in the region of £40 million a year. The decision to accept the employers' offers ends the deadlock which at one

time threatened serious interference with production if the unions' threat to ban overtime and piecework had been implemented.

C.I.E. Wages Claim

New wage claims have been presented on behalf of 17,000 employees of C.I.E. They would cost an extra £1,000,000 if conceded. The National Union of Railwaymen has asked for an increase of £1 a week for its members and the A.S.L.E.F. has asked for a 15 per cent increase. It was stated at a hearing before the C.I.E. Joint Industrial Council that its official index figure was not a true reflection of actual cost of living in the homes. The General President of the Irish Transport & General Workers' Union stated that the railway workers' position was desperate, for many could buy only the bare necessities for themselves and their families.

The Staff Relations Officer of C.I.E. stated that the total wage bill of the company was £8,000,000 last year, and that rates and fares would have to go up if the claims were conceded. The situation of C.I.E. was serious, he said, and the Board had instructed him to make it known that it intended to recover immediately whatever increases were made in wages.

After a two-day hearing the C.I.E. Joint Industrial Council made the following unanimous recommendations: 8s. increase in basic rates for male adult staff; 6s. increase in basic rates for female adult staff; and 4s. increase in basic rates for juveniles. The increases were to be retrospective from the first full pay period in November.

The four unions making the application were the National Union of Railwaymen, the Irish Railwaymen's Union, the Irish Transport & General Workers' Union and the Associated Society of Locomotive Engineers & Firemen.

The recommendation will cost C.I.E. an additional £173,000 a year.

Parliamentary Notes

Transport Bill

Mr. A. T. Lennox-Boyd (Minister of Transport) on November 5 presented to the House of Commons the Transport Bill, which was read the first time.

The Bill is supported by Mr. Winston Churchill (Prime Minister), Mr. R. A. Butler (Chancellor of the Exchequer), Sir David Maxwell Fyfe (Home Secretary), and Mr. Gurney Braithwaite (Parliamentary Secretary to the Ministry of Transport).

Iron & Steel Bill

Mr. Duncan Sandys (Minister of Supply) on November 5 presented to the House of Commons the Iron & Steel Bill, which was read the first time.

The object of the Bill is "to repeal the Iron & Steel Act, 1949, and to dissolve the Iron & Steel Corporation of Great Britain; to establish an Iron & Steel Board for the supervision of the iron and steel industry and to define the functions of that Board, and to make other provision as to the said industry; to provide for the return of iron and steel undertakings to private ownership and for the disposal of the property, rights, liabilities and obligations of the said Corporation; and for purposes connected with the matters aforesaid."

The Bill is supported by Mr. Churchill, Mr. Butler, Sir Reginald Manningham-Buller (Solicitor-General), and Mr. A. R. W. Low (Parliamentary Secretary to the Ministry of Supply).

Steel Industry

Replying for the Government in the House of Lords debate on the Address on November 5, Viscount Swinton (Minister of Materials), said that if steel nationalisation had gone on, there would have been far too much interference of the wrong kind, centralised control over very efficient individual companies and not central individual control over the broad principles of much of the industry which ought to have been controlled in that way.

Decentralisation in Transport

If the railways were to develop, Lord Swinton added, they must have more decentralisation, so that managements with knowledge of local needs could try out their ideas. He did not think they should try to steam-roller the thing into uniformity. The pride of the individual railways in the old days had a certain merit, he continued. It was all very well to laugh about the G.W.R., "God's Wonderful Railway," as they were told it was called in Wales; but there was something in that pride.

The railways, said Lord Swinton, were too restricted in their charges. They had to serve industry fairly; and they had been kept in a strait-jacket imposed when there was no road transport competition and when it was considered essential to curb monopolies.

In road haulage, in which he wanted the railways to have their chance, they could have a nationalised industry and a private industry side by side. It was a good thing that one should stimulate the other. They did not want uniformity and centralisation; in road transport they needed flexibility and a ready response to local conditions.

Questions in Parliament

Import of Steel

Mr. Gerald Nabarro (Kidderminster—C.), on November 10, asked the Minister of Supply, what quantities of steel had not arrived from U.S.A. against the proposed supply of 1,000,000 tons during 1952; and whether the full estimated quantity would be made available to manufacturers and Government departments and factories in U.K. by December 31, 1952.

Mr. Duncan Sandys: The quantities specified in the Washington Agreement related to deliveries at works in America or elsewhere. By October 31 about 600,000 tons of steel, pig iron, and scrap had arrived in Britain. A further 200,000 tons is expected by the end of the year.

Disused Railways

Mr. George Odey (Beverley—C.) on October 23, asked the Minister of Agriculture, whether he would take steps to ensure that when roads and railways fell into disuse the land was made available for agricultural purposes.

Sir Thomas Dugdale wrote in reply: The resources likely to be available for work of this character will remain strictly limited. They can best be used for increasing production from land which will respond more readily and at much lower cost than the type of land mentioned.

Transport Tribunal Staff

Colonel Alan Gomme-Duncan (Perth & East Perthshire—C.), on November 10, asked the Minister of Transport, why the staff of the Transport Tribunal had been increased from 10 in 1951-52 to 15 in 1952-53.

Mr. A. T. Lennox-Boyd wrote in reply: In August, 1951, my predecessor transferred to the Transport Tribunal under section 73 of the Transport Act, 1947, the functions of the Appeal Tribunal established under the Road & Rail Traffic Act, 1933. The staff was increased to deal with the additional work, but this increase was more than offset by the saving of the staff of the Appeal Tribunal.

Contracts & Tenders

The Indian Government has placed the following further contract under its 1953 programme:—

Wiener Lokomotivfabrik A.G., Austria: Item 7, 22 "XA" boilers; Item 10, 20 "XE" boilers; Item 12, 32 "HSM" boilers; and 25 additional "XA" boilers

The Railway Executive has announced that it is undertaking an immediate first expenditure of up to £500,000 on a programme to introduce multiple-unit diesel trains for passenger traffic. It is intended to place the first contract for the provision of power equipments for 16 motorcar units with Leyland Motors Limited, which will supply the engines, and with Walker Bros. (Wigan) Ltd., which will supply the transmissions. Further reference to the programme is made elsewhere in this issue.

The eight first class carriages which, as recorded in our July 18 issue, have been ordered from the Metropolitan-Cammell Carriage & Wagon Co. Ltd. by the Crown Agents for the Colonies for the East African Railways & Harbours, will be sleeping cars. Four will be for the Tanganyika Section and four for the Kenya & Uganda Section.

Orders for 300 passenger vehicles have recently been announced by the Canadian National Railways. It is expected that deliveries will be spread over the next two years and the cost of the new equipment, estimated at over £16 million, will be spread over the same period.

The Canadian Car & Foundry Company has been given orders for the building and completion of 161 first-class coaches, each of 76-seat capacity. The Pullman Standard Car Company has received orders for 84 sleeping cars; six dinette cars equipped for lunch counter service; 14 standard dining cars; nine cafe parlour cars; six parlour cars; ten buffet sleepers; eight buffet lounge cars; and two parlour buffet cars.

The Board of Trade, Special Register Information Service, has recently reported a call for tenders issued by the Department of Supply & Development (Supplies Wing), Government of Pakistan, for the supply of 1,056,000 mild-steel dog spikes, for the broad gauge. Tenders should reach the Office of the Director General of Supply & Development, Karachi, by 11 a.m. on Monday, November 24. A copy of the tender documents was available for inspection at the Board of Trade, Commercial Relations & Exports Department, by representatives of United Kingdom manufacturers until November 12, after which date it has been available on loan in order of written application. Reference CRE/37046/52 should be quoted.

Notes and News

Locomotive Inspectors Required.—A firm of Consulting Engineers require inspectors for locomotives to be built at contractors works in South Lancashire. See Official Notices on page 559.

"Wealdstone and the Problem of Train Control."—On Tuesday, November 18, Mr. Cecil J. Allen will broadcast at 9.15 p.m. in "The World Today" series on "Wealdstone and the Problem of Train Control."

Vacancy for Railway Draughtsman-Surveyor.—Applications are invited for the post of railway draughtsman-surveyor, between 25 and 30 years of age, required by a firm of railway contractors. See Official Notices on page 559.

Accident at Guildford.—The 8.54 p.m. electric train from Waterloo to Guildford via Ascot ran into a light engine outside Guildford on November 8. Two men, one of whom was the motorman, were killed, and many passengers were injured.

London Midland Region Dramatic Society's Production.—British Railways (London Midland Region) London Dramatic Society is to present the play "The Man Who Came To Dinner" at the Rudolf Steiner Theatre, London, N.W.1, on November 27, 28, and 29.

Crown Agents for the Colonies.—Applications are invited for the post of draughtsman, between 25 and 35 years of age, required by the engineering department, East African Railways & Harbours for one tour of 40-48 months in the first instance. See Official Notices on page 559.

Anglo-Scottish Motorcoach Services.—The Metropolitan Area licensing authority has supported licences granted in Scotland allowing Northern Roadways Limited to operate a night bus service between Glasgow and Edinburgh and London. Earlier this year, after appeals by British Railways and passenger road transport concerns, the Ministry of Transport revoked the firm's licences granted in February, 1951. Northern Roadways then pointed out that 30,000 bookings had already been made for the summer, and cancellation of the licences was postponed until September 30. The firm was licensed to continue the service by the Scottish Licensing Authority in September. Application was made to the Metropolitan authority last month. The question of objections by nationalised transport undertakings to the granting of the licence was the subject of editorial comment in our issue of April 11. The Railway Executive and eight bus companies have announced that they will appeal to the Minister of Transport against the licensing authority's ruling.

Port of Trieste: Freight Traffic with Iron Curtain Countries.—The Austrian Federal Railways announce that the introduction of direct freight charges for traffic between the port of Trieste and stations in Czechoslovakia and Hungary was discussed at a meeting in October between the railway administrations concerned.

Reconditioning of London Transport Class "F" Stock.—The ninety-nine cars of Class "F," built for the Metropolitan District Railway in 1920-21 and now allocated to the Metropolitan Line of London Transport, are being reconditioned at Acton Works. The stock operates in eight-car trains to Harrow-on-the-Hill and Uxbridge.

British Transport Loan Applications.—In allocation of the cash issue of £60 million British Transport 4 per cent guaranteed stock 1972-77, offered last week at £95 10s. per cent, applications for amounts of stock up to and including £100,000 were allotted in full, while applicants for larger amounts received about 78 per cent of the amounts applied for.

British Railways Coal, Iron, and Steel Carryings.—British Railways carried 371,540 tons of coal from deep-mined pits and opencast sites during the 48 hours ended 6 a.m. on November 10. This made a total of 3,222,930 tons for the week. During the week ended November 1, 221,697 tons of iron and steel were conveyed from the principal steelworks and 305,000 tons of iron ore were carried.

Record Steel Production in October.—The output of steel ingots and castings in October was at an annual rate of 17,044,000 tons, compared with a rate of 17,149,000 tons in September and of 15,629,000 tons in October of last year. Pig iron production in October was at an annual rate of 10,616,000 tons, against 10,845,000 tons in the previous month and 9,865,000 tons in October, 1951. The British Iron & Steel Federation points out that although pig iron and steel production were affected last month by the bricklayers' strike at the works of the Steel Company of Wales, the steel rate for October was the highest ever recorded for the month, at 17,044,000 tons. The annual rate in October last year was 15,629,000 tons. Output, it is stated, is benefiting increasingly from the new plant and extensions resulting from the industry's first postwar Development Plan embarked on in 1946.

Institute of Transport, Metropolitan Section.—The Annual General Meeting of the Institute of Transport, Metropolitan Section, will be held at 80, Portland Place, W.1, at 5.30 for 6 p.m. on Monday, December 1. Following this meeting Mr. C. F. Klapper will read a paper on "Decline & Fall of the London Tramways."

Windows Broken of Up and Down Passing Trains.—As the 7.20 p.m. Euston to Inverness passed the 4.15 p.m. Wolverhampton to Euston train on adjacent tracks near King's Langley, L.M.R., about 8 p.m. on November 9, all the windows of one coach of the down and all those of two coaches of the up train were smashed, injuring some 30 passengers, though none seriously. An axlebox cover found later on the track is believed to have ricocheted between the trains.

Woodhead Tunnel Completion Forecast.—It is hoped that the new bore of the Woodhead Tunnel will be ready for handing over to British Railways next July, after which a double track will be laid and overhead equipment erected. Overhead equipment is already in position from one mile west of the tunnel to Gorton, except for the section through Guide Bridge. Preparations are being made at Manchester London Road for laying the concrete foundations for the structures carrying the contact line.

Delays to Traffic Caused by Gales.—Gales which swept over the country and parts of Europe on November 7 caused delay to railway and cross-Channel steamer services. Debris blown on to the line affected services to the North from Kings Cross and a tree which fell across the track at Pulborough delayed mid-Sussex line trains. The train ferry was unable to leave Dunkirk and passengers were brought over on the Folkestone service. A vessel which sank at the Hook of Holland delayed sailings to and from Harwich.

International Union of Railways.—The tenth General Assembly of the International Union of Railways will be held in Paris on November 19; Monsieur L. Armand, Chairman of the I.U.R., and Director-General of the French National Railways, will preside, and Mr. John Elliot, Chairman of the Railway Executive, will be present as Vice-Chairman. The 34th meeting of the I.U.R. Board of Management will be held on November 17 and 18 and the 35th meeting after the General Assembly. Mr. R. H. Hacker, Chief Officer (Continental), the Railway Executive, will attend as Chairman of the First Committee (Passenger Traffic), and

Last of the Brighton Class "13" Tank Engines

No. 32091, shortly to be broken up, was built in 1913, for the L.B. & S.C.R. and after grouping was modified to suit the Southern Railway loading gauge. A proposal for the preservation of this locomotive has been made in our correspondence columns

OFFICIAL NOTICES

The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

RAILWAY DRAUGHTSMAN-SURVEYOR required by large firm of railway contractors. Applicants must have ability to carry out site surveys, plot same in layout form to good working scale (detailing for manufacture of turnouts, etc., done by other draughtsmen), capable of full use of theodolite and level, duties to include site supervision of contracts in progress, age 25-30 years, man with British Standard Specification experience preferred, conditions of employment to include provision of car, all travelling and general expenses, five-day week on rota system, comprehensive superannuation scheme, etc. Write in first place, stating age, experience and salary required.—Box No. 660, *Railway Gazette*, 33, Tothill Street, London, S.W.1.

A LEADING Mutual Life Assurance Office requires a number of young men for training as outside representatives. Exceptional opportunities for advancement to those possessing a sound education and good personality, and who are prepared to work hard and prove their ability. Write stating age, which should not exceed 30, to Box, No. 645, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

ELECTRICAL ENGINEER, A.M. (S.A.) I.E.E., 38 years, English, now in S. Africa, experienced industrial power engineering and Stones train lighting systems, seeks change. Willing to travel anywhere. —Box 654, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

CROWN AGENTS FOR THE COLONIES

DRAUGHTSMAN required by the Engineering Department, East African Railways and Harbours, for one tour of 40-48 months in the first instance. Salary (including temporary allowance) according to age and qualifications in scale £887 rising to £1,012 a year. Outfit allowance £30. Superannuation fund. Free passages. Liberal leave on full salary. Candidates between 25 and 35 years of age, should have a sound knowledge of Engineering Works and building construction and of the design of structural steel and reinforced structure. They should be capable of taking out quantities and preparing estimates. Apply at once by letter, stating age, full names in block letters, and full particulars of qualifications and experience, and mentioning this paper to the Crown Agents for the Colonies, 4 Millbank, London, S.W.1, quoting on letter M.29427/D. The Crown Agents cannot undertake to acknowledge all applications and will communicate only with applicants selected for further consideration.

LOCOMOTIVE RERAILING AFTER THE WEEDON ACCIDENT. A reprint from *The Railway Gazette*, consisting of 12 pp. in paper cover, describing an interesting and unusual method of Locomotive Rerailing. Price 5s. post free. TOTHILL PRESS LIMITED, 33, Tothill Street, London, S.W.1.

DRAUGHTSMAN with experience in the preparation of engineering drawings for reproduction in technical journals required by London publishing house. Good lettering essential. Salary according to ability. 5-day week. Write, stating age, experience, and salary required.—Box 651, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

N.E.R. HISTORY.—Twenty-Five Years of the North Eastern Railway, 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10s. 6d.—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

CONSULTING ENGINEERS require Inspectors for Locomotives to be built at contractor's works, South Lancashire. Applicants must have served recognised apprenticeship British Railways or reputable firm locomotive builders and have had at least five years' subsequent experience locomotive manufacture or shop repairs, also experience in one of following branches—inspection, physical testing, welding or M.O.T. certificate. State age, experience and salary required to Box 692, c/o Dawson's, 129, Cannon Street, E.C.4.

TYNE IMPROVEMENT COMMISSION

THE TYNE IMPROVEMENT COMMISSIONERS are undertaking major port development schemes and invite applications from Civil engineers for appointment to their Technical Staff in connection with the design, construction and maintenance of Dock and Harbour works. Commencing salaries will be in accordance with the qualifications and experience of the successful candidates and within the range of £462 to £741 per annum, plus a war bonus of £65 per annum. Applicants should be experienced in design and the preparation of estimates, contract documents and drawings for reinforced concrete and steel structures, retaining walls, under water foundations, small industrial buildings, water supply, etc., and should preferably have a University degree in Engineering and/or be Corporate or Student member of the Institution of Civil Engineers. Successful applicants will be required to pass a medical examination and to become members of the Tyne Commission Superannuation Fund. Applications stating age, qualifications and experience, together with copies of recent testimonials, should reach the undersigned not later than November 29, 1952.—J. K. MCKENDRICK, Secretary, TYNE IMPROVEMENT COMMISSION, Bewick Street, Newcastle-upon-Tyne, 1.

BOUND VOLUMES.—We can arrange for readers' copies to be bound in full cloth at a charge of 25s. per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

Mr. C. E. R. Sherrington as Chairman of the Special Committee for Exchange of Documentatives. The British delegation will include Mr. W. B. Addinall, Secretary of the I.U.R. London office. All the above will attend both the General Assembly and the Board of Management meetings. London Transport is participating for the first time as an associate member administration, and will be represented by Mr. H. R. Broadbent.

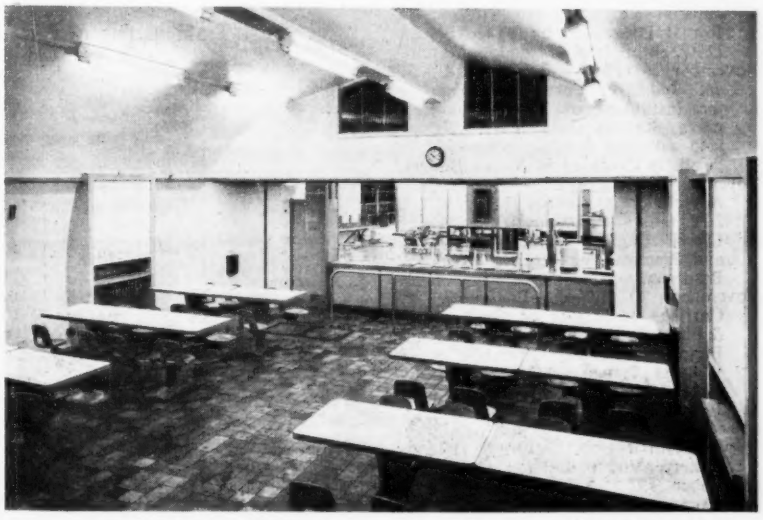
Level-Crossing Accident in France.—Four adults and a child were killed on November 4 when a diesel railcar ran into a tank lorry which had broken down on a crossing at Basse-Indre, near Nantes.

Havana Terminal Stockholders Approve United of Havana Scheme of Arrangement.—A meeting of the holders of the 5 per cent mortgage debentures and debenture stock of the Havana Terminal Railroad on November 6 approved the United of Havana scheme of arrangement. The scheme is to be submitted to holders of the loan and share capital of United Railways of the Havana & Regla Warehouses, Limited, on November 27. It was described in our October 24 issue.

Central Wagon Payments: Possible Further Return.—Shareholders of the Central Wagon (Holding) Co. Ltd., are to consider the proposal to distribute £2 10s. nominal of British Transport 3 per cent 1968-73, stock in respect of every £1 share held, at a meeting on November 26. This follows the decision of the Inland Revenue not to proceed further with the tax claim arising from expropriation of wagons of two of the company's subsidiaries. It is expected that after providing for this capital distribution and for estimated requirements for maintenance and development, the group will have a balance of cash surplus to its needs, equivalent to approximately £1 a share. It is stated that consideration is being given to this surplus being distributed among shareholders in the form of a further capital distribution, which might have to be preceded by a reorganisation within the group, involving possibly liquidation of the company and the obtaining of certain authorisations. The £2 10s. a £1 share distribution represents £1¼ million of British Transport 3 per cent stock, part of the capital surpluses arising out of the liquidation of the subsidiaries, the Doncaster Wagon (Holding), and the Central Wagon Hiring Company.

Staff Canteen in Underground Tunnel.—London Transport has brought into service a new staff canteen at Liverpool Street, housed in a long-disused tunnel that once linked the Metropolitan and Great Eastern Railways. The Metropolitan Railway was extended from Moorgate to a junction with the Great Eastern Railway at Liverpool Street (Great Eastern) Station on February 1, 1875, but a service of trains to the main-line station was provided only until July 12 of that year; Metropolitan trains were then diverted to the new Bishopsgate Station, later renamed Liverpool Street (Metropolitan Railway). The connection between the two railways was used from time to time for special trains and goods traffic until the junction was removed in 1907. The canteen, which seats sixty, is primarily for the use of the crews of buses on routes terminating at Liverpool Street. The scheme of conversion was prepared under the supervision of Mr. Thomas Bilbow, F.R.I.B.A., Architect, London Transport Executive. R. F. King Limited was the main contractor.

Railway Freight, Dock, and Canal Charges.—The Minister of Transport, Mr. A. T. Lennox-Boyd, announces that he has



New canteen for London Transport bus crews in a disused tunnel at Liverpool Street

received from the B.T.C. an application for authority under Section 82 of the Transport Act, 1947, to make an increase of 5 per cent. in its railway freight, dock, and canal charges, as from December 1, 1952. As required by the Act, the Minister has referred the application to the Permanent Members of the Transport Tribunal acting as a consultative committee, and has asked that their advice be tendered to him as soon as possible. Editorial reference to this application was made in our issue of November 7.

Forthcoming Meetings

November 15 (*Sat.*).—British Railways, Southern Region, Lecture & Debating Society. Visit to London Airport.

November 17 (*Mon.*).—Institute of Transport, at the Jarvis Hall (R.I.B.A.), 66, Portland Place, W.1, at 5.45 p.m. "Statistical Methods and Operational Research in Transport," by Mr. F. A. A. Menzler.

November 17 (*Mon.*).—Railway Students' Association. Visit to Mechanised Freight Depôt at Birmingham Lawley Street. Party will leave Euston at 8.20 a.m.

November 17 (*Mon.*) to 21 (*Fri.*).—Railway Correspondence & Travel Society and Railway Photographic Society. Photographic Exhibition, at Manchester Victoria Station.

November 19 (*Wed.*).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, S.W.1, at 5.30 p.m. "Stresses in Locomotive Coupling and Connecting Rods," by Dr. H. I. Andrews.

November 19 (*Wed.*).—Institute of Metals, at the Royal Institution, Albemarle Street, W.1, from 9.45 a.m. to 5 p.m. Symposium on "Properties of Metallic Surfaces."

November 19 (*Wed.*).—Permanent Way Institution. London Section, joint meeting with Croydon Section, at the Railway Executive Headquarters, 222, Marylebone Road, N.W.1, at 6.30 p.m. Discussion, "Track Maintenance and Electrification," by Mr. A. Savill and Mr. F. G. Edwards.

November 19 (*Wed.*).—Institution of Railway Signal Engineers, at the Institution of Electrical Engineers, Savoy Place, W.C.2, at 6 p.m. "Track Circuits in d.c. Electrified Areas": Informal Discussion on paper by Mr. D. G. Shipp, read in London, March 5.

November 20 (*Thu.*).—Society of Chemical Industry, Corrosion Group, at the Institution of Mechanical Engineers, Storey's Gate, S.W.1, between 9.45 a.m. and 5 p.m. Symposium on "Caustic Cracking in Steam Boilers."

November 20 (*Thu.*).—Diesel Engine Users' Association, at Caxton Hall, S.W.1, at 2.30 p.m. "Torsional Vibration in Diesel Engines—Some Observations and Practical Aspects," by Mr. C. H. Bradbury.

November 20 (*Thu.*).—Locomotive & Carriage Institution of Great Britain & Eire, at the Railway Clearing House Board Room, 163, Eversholt Street, W.1, at 7 p.m. "The Locomotive Testing Station, Rugby," by Mr. R. H. Johnson.

November 22 (*Sat.*).—British Railways, Southern Region, Lecture & Debating Society. Visit to London Airport.

November 22 (*Sat.*).—Locomotive & Carriage Institution of Great Britain & Eire. Annual Dinner at the Lysbeth Hall, 10, Soho Square, W.1.

Railway Stock Market

Instead of stimulating stock markets, the outcome of the U.S. Presidential election has increased uncertainty, and values in most sections have lost ground, because of suggestions that the new Administration will follow a policy of disinflation and may raise rather than lower tariffs. Moreover, commodity and base metal shares have lost ground on the view that a sharp fall in commodity and metal prices seems likely next year, particularly if there is an early end of the Korean war. On the other hand, lower commodity and metal prices would be a bull point for industrial companies, which in 1953 may have the first substantial fall in production costs for years.

Business in foreign rails was on a very moderate scale, though one or two fairly active features were in evidence.

United of Havana stocks generally were more active with speculative buying of the 5 per cent 1906 debentures which have strengthened to 17¼ at the time of going to press, with the 4½ per cent Cuban debentures 37 and the 4½ per cent Western debentures 20. Sentiment has been helped by the approval of the capital scheme by Havana Terminal debenture holders. This, it is assumed in the market, means that the scheme can now be expected to go through, as it is likely to be approved by the stockholders in United of Havana. There are rumours that dissenting Havana Terminal stockholders might decide to take matters to the courts on the view that their currency clause rights should not be modified. The prevailing view is, however, that this would not defeat the proposals, though it would mean delay, which might perhaps lessen the chance of a reasonable take-over purchase offer from Cuba. Havana Terminal debentures eased this week to 70.

Peruvian Corporation issues remained depressed on the proposed extension of the debenture moratorium. The debentures changed hands around 63, the preference stock was 6¼ and the ordinary only 2⅛.

There has been much selling of White Pass & Yukon down to $19¼ by speculators, many of whom already have a good profit and feel that the common shares have to be regarded more as a long than a short term holding, now that earlier reports of a possible take-over offer from U.S. interests appear to have been gossip without any foundation. At their current level, the shares discount the scope for expansion in the company's earnings a long way ahead, but they are likely to remain a lively market and will probably move sharply either way. The convertible debentures have come back to £70.

Canadian Pacifics after firming up with the better tendency in dollar stocks which followed the U.S. election result, have come back to $59½. The 4 per cent preference stock was £64½ and the 4 per cent debentures £82½.

Mexican Central "A" debentures were lower at 67, but Manila Railway "A" debentures have been steadier at 73 and the preference shares 8s. Nitrate Rails shares receded to 18s. and Taltal shares were 14s. 6d. San Paulo 10s. units changed hands around par. Dorada ordinary stock attracted some attention up to 47, and there was more business in Costa Rica stocks with business in the ordinary up to close on 8¼ and in the first debentures at 61½. Midi and Orleans 4 per cent sterling bonds were both 78½.

Road transport shares were generally maintained with West Riding at 33s. 6d., Southdown 77s. 6d., Lancashire Transport 42s., while Devon General marked 91s. 3d. and the 7 per cent preference 24s.

Engineering shares were quiet, with small irregular movements. Vickers changed hands around 41s. 6d., Cammell Laird 5s. shares at 11s. 9d. and Guest Keen around 52s. T. W. Ward were lower at 71s. and Ruston & Hornsby 37s. It may well be a year or more before steel denationalisation plans have reached a stage where the public can be offered a chance to take up shares in the iron and steel companies. It is thought that before this, engineering companies will be given an opportunity to re-acquire their old steel subsidiaries. Whether the companies will re-acquire their steel interests will depend on the terms offered.

Among locomotive building and engineering shares, Beyer Peacock were 31s., Birmingham Carriage 32s., Hurst Nelson 45s. and North British Locomotive 13s. 9d. Gloucester Wagon 10s. shares were 11s. 9d., Central Wagons 98s., Charles Roberts 5s. shares 20s. 6d. and Wagon Repairs 5s. shares 12s. 6d. Vulcan Foundry were 23s. 3d. and G. D. Peters 5s. shares 17s. 6d.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week, or month ended	Traffics for week: This year	Inc. or dec. compared with 1950/51	No. of week	Aggregate traffics to date: Total 1951/52	Increase or decrease
				£	£		£	£
South & Cen. America	Antofagasta ...	800	31.10.52	194,790	+ 45,370	44	6,772,560	+ 1,440,030
	Costa Rica ...	281	Sep., 1952	c1,207,759	+ c73,182	13	c4,064,027	+ c360,780
	Dorada	70	Aug., 1952	38,470	+ 1,494	35	273,997	— 14,450
	Inter. Ctl. Amer....	794	Sep., 1952	$909,367	— $20,744	39	$9,797,041	— $169,447
	Paraguay Cent. ...	274	31.10.52	G642,258	+ G266,567	17	G10,688,187	+ G4,681,076
	Peru Corp. ...	1,050	Sep., 1952	$9,688,000	+ $1,755,000	13	$28,850,000	+ $4,333,000
	" (Bolivian Section)	66	Sep., 1952	Bs.15,428,000	+ Bs.1,024,000	13	Bs.47,406,000	+ Bs.6,011,000
	Salvador	100	Aug., 1952	c138,000	— c3,000	9	c276,000	+ c10,000
	Taltal	122	Sep., 1952	$3,351,000	+ $902,000	13	$8,538,000	+ $2,234,000
Canada	Canadian National†	23,473	Sep., 1952	19,197,000	+ 1,551,000	39	167,187,000	+ 13,772,000
	Canadian Pacific†...	17,037	Sep., 1952	13,024,000	+ 1,034,000	39	113,083,000	+ 8,082,000
Various	Barsi Light* ...	167	Sep., 1952	20,055	— 4,297	26	189,975	— 25,627
	Gold Coast ...	536	Sep., 1952	251,844	+ 73,121	25	1,636,832	+ 226,698
	Mid. of W.Australia	277	Aug., 1952	54,609	— 6,306	9	105,559	— 8,162
	South Africa ...	13,398	18.10.52	1,982,406	— 10,579	32	56,548,747	+ 1,925,924
	Victoria	4,744	July, 1952	2,062,237	+ 329,462	4	—	—

* Receipts are calculated at 1s. 6d. to the rupee † Calculated at $3 to £1